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Klamath Falls Resource Area
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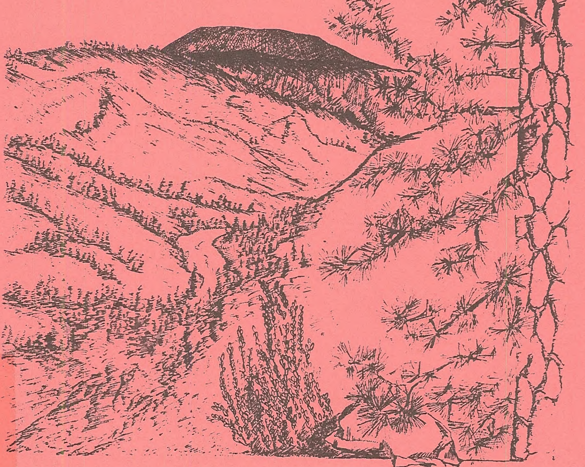
September 1994

Klamath Falls Resource Area Resource Management Plan and Environmental Impact Statement

Volume III



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As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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Proposed Resource Management Plan/ Final Environmental Impact Statement

for the

Klamath Falls Resource Area

Prepared by

Klamath Falls Resource Area Office
Lakeview District
September 1994

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Elaine Zielinski
State Director, Oregon/Washington

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Acronyms

ACEC	Area of Critical Environmental Concern
AMS	Analysis of the Management Situation
AMP	Allotment Management Plan
AQMA	Air Quality Management Area
ARD	Automated Resource Data
ASQ	Allowable Sale Quantity
AUM	Animal Unit Month
BLM	Bureau of Land Management
BMP	Best Management Practices
BR	Bureau of Reclamation
BS	Bureau Sensitive (species)
CDWR	Critical Deer Winter Range
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CMAI	Culmination of Mean Annual Increment
CRMP	Coordinated Resource Management Plan
DBH	Diameter at Breast Height
DEIS	Draft Environmental Impact Statement
DEQ	Oregon Department of Environmental Quality
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FC	Federal Candidate (species)
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
FLPMA	Federal Land Policy and Management Act
GIS	Geographic Information System
HCA	Habitat Conservation Areas
HMP	Habitat Management Plan
IDT	Interdisciplinary Team
IPM	Integrated Pest Management
ISC	Interagency Scientific Committee
KFRA	Klamath Falls Resource Area
L-S/DDR	Late-Successional/District Designated Reserve
LTSY	Long-Term Sustained Yield
MBF	Thousand Board Feet
MCF	Thousand Cubic Feet
MFP	Management Framework Plan
MMBF	Million Board Feet
MMCF	Million Cubic Feet
MOSS	Map Overlay and Statistical System
MOU	Memorandum of Understanding
MTP	Master Title Plat
NA	No Action (alternative)
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NWR	National Wildlife Refuge
NWSRA	National Wild and Scenic Rivers Act
OAR	Oregon Administrative Rules
O&C	Oregon and California Act of 1937 (Revested Oregon and California Railroad and Reconveyed Coos Bay Wagon Road Grant Lands)

ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OEDD	Oregon Economic Development Department
OFPA	Oregon Forest Practices Act
OHV	Off-Highway Vehicle
OI	Operations Inventory
ONHP	Oregon Natural Heritage Program
ORS	Oregon Revised Statutes
ORV	Outstandingly Remarkable Values (for wild and scenic rivers)
OSMP	Oregon Smoke Management Plan
OSU	Oregon State University
PCNST	Pacific Crest National Scenic Trail
PCT	Pre-Commercial Thinning
PD	Public Domain
PM	Particulate Matter
PL	Public Law
PNC	Potential Natural Communities
PNW	Pacific Northwest Research Station
PSQ	Probable Sale Quantity
R&R	Retention and Restoration (blocks)
RMA	Riparian Management Area
RMP	Resource Management Plan
RNA	Research Natural Area
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Right-of-Way
RTMS	Ten-year Representative Timber Management Scenarios
SC	State Candidate (species)
SCS	Soil Conservation Service
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SIP	State Implementation Plan
SL	State Listed (species)
SYU	Sustained Yield Unit
T&E	Threatened and Endangered (species)
TMDL	Total Maximum Daily Loads
TPCC	Timber Production Capability Classification
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
VRM	Visual Resource Management
WODDB	Western Oregon Digital Data Base
WSA	Wilderness Study Area

Appendix Y
Public Involvement

Summary of Scoping

Scoping of the Klamath Falls Resource Management Plan/Environmental Impact Statement began in September 1986, when a mailer was sent to a mailing list of some approximately 2,100 parties, inviting them to identify issues and concerns for the Bureau of Land Management (BLM) to consider in the planning process. At that time the lands now managed by the Klamath Falls Resource Area west of U.S. Highway 97 in Klamath County were managed by the Medford District. Ten open houses were held by the Medford District BLM during the comment period, to help interested parties focus on the questions.

In September 1987 the boundary between the Lakeview and Medford Districts was moved to the Jackson/ Klamath County line and the Klamath Falls Resource Area assumed management of BLM lands west of U.S. Highway 97 in Klamath County.

In 1989 the decision was made to broaden the scope of the resource management plan to include all of the lands managed by the Klamath Falls Resource Area. At that time the responsibility for the resource management plan/ environmental impact statement was transferred from the Medford District office to the Klamath Falls Resource Area. In May of that year a mailer was sent to a list of approximately 550 people to identify any additional issues or concerns associated with the management of all the lands within the resource area. The Klamath Falls Resource Area held two open houses to help interested parties focus on their concerns.

Once the comments were received, the resource area's planning team and managers distilled a list of issues and concerns. The BLM distinguished an issue as a matter of controversy or dispute over resource management activities or land uses that are well defined or topically discrete and could be addressed in the formulation of the planning alternatives. In practice, issues are resolved by resource allocations, and do not lend themselves to formulating land use alternatives. Concerns are usually addressed by analysis and documentation in the resource management plan/environmental impact statement. Some of the concerns identified are not addressed by this resource management plan/environmental impact statement as they are beyond the control of the BLM state director, are unrelated administrative problems, or are not within the legal jurisdiction of the BLM.

The issues and concerns identified are described in Chapter 1. This list of issues and concerns was sent to interested parties in March of 1987 and again in May of 1989.

Further scoping after that related to refinement of the issues, and determination of a reasonable range of alternatives to address in the resource management plan/environmental impact statement. The latter facet of scoping was handled through the development of a state director guidance for the formulation of the alternatives. The development of the state director guidance for the resource management plan process is discussed in Appendix C. This guidance also proposed a number of sensitivity analyses for the primary alternatives to address relevant management options that could not be effectively addressed in a manageable array of fully analyzed alternatives.

In public comments and internal discussions, there were a number of alternatives, or potential elements of alternatives, considered but eliminated from detailed analysis. These are summarized in the following discussions:

- Alternatives that would meet specific timber production target levels (such as one identified in a regional supply analysis or one that would maintain the level in existing plans). Such alternatives could be explicitly designed only with an optimization model. Early in the planning process, the BLM chose not to invest the many millions of dollars that would have been necessary to adopt and use an optimization model in its western Oregon planning effort.

- Alternatives that would explicitly reflect the policies and programs of the Oregon and California counties, and of the State. Until opportunities and tradeoffs are fully analyzed, such alternatives could not be formulated. At that point in the process, it was the BLM's intent to develop a preferred alternative consistent with those policies and programs to the extent that they are consistent with each with federal laws and regulations.

- An alternative based on the assumption that Federal Land Policy and Management Act, rather than the Oregon and California Act, would be the predominant statutory mandate for management of the Oregon and California lands. None of the initial set of alternatives was based on specific real or assumed statutory mandate. The BLM believes that management under the Federal Land Policy and Management Act falls within the range established by the initial set of alternatives.

- A no planned timber harvest alternative. The BLM considers such an alternative for all BLM-administered lands in western Oregon outside the reasonable range of alternatives. The counterpart of a no timber harvest alternative would be an alternative that would remove all merchantable timber during the life of the plan. Such a departure from sustained yield principles is also clearly outside the reasonable range of alternatives.

- A no grazing alternative. The BLM considered such an alternative for all BLM-administered lands in the Klamath Falls Resource Area to be so close to Alternative E that an extra alternative was not added.

- Alternatives that would consider using neither intensive management practices nor the allowable cut effect in setting an allowable sale quantity. The effect of foregoing these can be identified from the sensitivity analysis of the preferred alternative.

- An alternative that would forego slash burning, and another that would forego the use of herbicides. These activities and the options to forego them were addresses in the BLM's Environmental Impact Statement, Western Oregon Program Management of Competing Vegetation, 1992. This resource management plan/ environmental impact statement is tiered to that environmental impact statement.

- An alternative that would use even-age management as the predominant silvicultural system. In many locations that prescription would fail to meet reforestation standards, a violation of the sustained yield mandate. Uneven-age management is considered for use in stands where it would be economically and environmentally feasible and reforestation standards could be met.

- An alternative that would exclude Site IV lands from timber harvest. Such an alternative would not address any important environmental or resource management objectives better than the options already being addressed.

- An alternative that would maximize timber production subject to the constraint of economic feasibility. Analysis of the economic feasibility of Alternative A showed that such a constraint would negligibly affect the allowable sale quantity of that alternative.

- Alternatives that would vary the size of spotted owl habitat protected for each nest site. In light of the Interagency Scientific Committee report and subsequent proposals by the U.S. Fish and Wildlife Service, the BLM concluded that such variation had little relevance.

- An alternative that would protect 110 spotted owl areas, as provided for in the 1987 revised BLM-Oregon Department of Fish and Wildlife agreement, was originally proposed by BLM. After the Interagency Scientific Committee report was released in 1990, this alternative no longer seemed relevant.

- An alternative that would manage all lands inventoried at Visual Resource Management Classes III and IV as Visual Resource Management Class II. Such an alternative would only be logical if matched with the other goals of an alternative and with a very constrained timber harvest base. This management option, intended to optimize protection of scenic values even on areas identified as low in scenic value, was felt to be too arbitrary to warrant its application as an additional constraint to alternatives that severely restrict timber production to emphasize more meaningful objectives.

- An alternative that would protect a minimum of ¼-mile wide riparian management areas along third order and higher streams, Class I streams, and other waters; and maintain and enhance water quality at the highest level of water quality required for municipal use. Such an alternative would exclude almost all commercial forest lands from timber management. Such extensive riarian management areas would be far in excess of what is needed to protect water quality and riparian values. Thus, it was considered outside the range of reasonable alternatives.

Public Involvement Following Publication of the Draft Resource Management Plan/Environmental Impact Statement

Statewide Public Involvement

There were numerous formal briefings and informal meetings with non-BLM groups and individuals that covered all six western Oregon draft resource management plans. These were usually coordinated by the BLM's Oregon State Office, although the formal briefings were led by former Eugene District Manager, Ron Kaufman. The following is a list of those formal briefings:

7/20/92	U.S. Fish and Wildlife Service, Portland, Oregon
8/6-13/92	U.S. Forest Service, Washington D.C. Senator Bob Packwood Senator Mark Hatfield (staff) Senator Slade Gorton (staff) Congressman Les AuCoin (staff) Congressman Norm Dix Congressman Peter DeFazio (staff) Congressman Peter Kopetski Congressman Bob Smith Congressman Ron Wyden BLM Washington Staff Assistant Secretary of the Interior and Staff Professional/Conservation Groups, Washington D.C. House Interior Appropriations Staff Senate Interior Appropriations Staff
8/19/92	Oregon and California Counties Executive Board
8/20/92	Environmental Groups (Oregon) Industry Associations (Oregon)
8/28/92	District Advisory Council
9/08/92	Governor's Forest Planning Team
9/16/92	Scientific Review Panel
9/17/92	Willamette Timbermen
9/22/92	Lane County Tax Equalization Group
10/6/92	U.S. Forest Service Willamette National Forest
10/8/92	Oregon State University Faculty
10/9/92	Willamette Forestry Council
10/21/92	Society of American Foresters, Portland, Oregon
10/26/92	Society of American Foresters, Eugene, Oregon
10/27/92	University of Oregon Faculty
11/2/92	University of Washington Faculty
11/10/92	Society of American Foresters, Roseburg, Oregon

Klamath Falls Resource Area Public Involvement

The Klamath Falls Resource Management Plan/Environmental Impact Statement was released for public review on August 21, 1992. The Federal Register Notice was printed on September 4, 1992 (Vol. 57, No. 173, page 40671).

As part of the planning process, the Klamath Falls Resource Area solicited public comments on its draft Resource Management Plan/Environmental Impact Statement. During the 120-day comment period from August 21 through December 21, 1992, the Klamath Falls Resource Area received 977 comment letters. The resource area continued to accept comment letters past the official closing date of the comment period and tried to consider these comments. The original comment letters are on file at the Klamath Falls Resource Area office and are available for review by the public.

The resource area received comments through letters, petitions, personal contacts, and public meetings. They were analyzed so meaningful changes could be made to the proposed action and in development of the proposed resource management plan/final environmental impact statement. Substantive comments are the most useful in development of the proposed resource management plan, although all comments are considered. Substantive comments are those indicating:

- errors in analysis
- new information that would have a bearing on the analysis
- misinformation that may have been used and could have affected the outcome of the analysis
- requests for clarification
- support of an existing alternative or definition of a substantive new alternative within the range of alternatives considered

Each comment was considered valuable whether substantive or otherwise; opinions, feelings, suggestions, and observations were also considered. Each comment was weighed on its own merit against legal and technical information, resource capability, and public opinion. The use of public comments was not a vote counting process.

The National Environmental Policy Act requires the BLM to respond to the substantive public comments received during a comment period. Responses to the substantive comments are in Appendix Z.

Resource Area Public Meetings

The Klamath Falls Resource Area staff had four meetings targeting the general public to disperse information, answer questions, and solicit input regarding the draft resource management plan/environmental impact statement. Approximately 50 people attended these meetings which were held in Klamath Falls, Keno, and Bonanza, Oregon.

In addition, the Klamath Falls Resource Area staff held several other meetings and discussions with interested people, groups, and organizations. The following is a list of those contacts:

8/11/92	Multiple Use Advisory Council
8/12/92	Klamath County Commissioners
8/12/92	Jim Keller, City Manager for Klamath Falls
9/8/92	Klamath County Chamber of Commerce, Agriculture and Forestry Subcommittee
9/22/92	Klamath Falls Professional Secretaries International
9/30/92	BLM Oregon State Office Staff Meeting with Klamath Falls Resource Area Resource Management Plan Team
10/13/92	Sherman Anderson
10/20/92	Multiple Use Advisory Council
11/2/92	Klamath County Trails Committee
11/3/92	Steve Potwin, Burrill Lumber Company of Medford
11/5/92	County Commissioners

11/10/92	Grazing Advisory Board, Lakeview
11/16/92	Federal Managers Breakfast
12/4/92	Dale Himmelwright, Klamath Basin Snowdrifters
1/23/93	Southern Oregon High Lakes Group
2/4/93	County Commissioners

Demographics

The Klamath Falls Resource Area received 977 letters, approximately 650 were letters, 318 form letters, 6 comments sheets, 2 petitions, and 2 fact sheets. Many letters contained more than one comment or comments similar to other letters. There were more than 450 different substantive comments and approximately 150 different preferences/opinions.

Letters were received from 24 states and Canada. The majority of the letters came from Oregon (452), California (421), and Washington (47).

Representation of the letters breaks down as follows: Affiliated with an organization 203; federal government 4; state government 3; local government 10; individuals 756; and multiple copies 2.

Topic	Number of Comments[1]	Topic	Number of Comments[1]
Air Resources	1	Rural Interface Areas	1
Biological Diversity	13	Socioeconomic Conditions	12
Cultural Resources	2	Soils	2
Energy and Minerals	5	Special Areas	5
Fire	6	Special Status Species	36
Fish	1	Timber	49
Funding	7	Vegetation	1
Lands, Rights-of-Way, Withdrawal	6	Visual Resources	2
Livestock Grazing	30	Water Quality	25
Recreation	24	Wild and Scenic Rivers	20
Riparian Resources	13	Wildlife	24
Roads	5		
Resource Management Plan/Environmental Impact Statement (General)			188

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[1] Refers to substantive comments only, not to the great number of preferences/opinions.

Content Analysis Process

Each letter received in the resource area office was given a date stamp and identification number. The original letter was copied and routed to management and the public input analysis team. The analysis team numbered, read, and coded each letter according to the subject(s) discussed. The coded comments were entered in to a computer data base to provide reports to management and the resource management planning team. The planning team then answered the comments with a response, correction to the document, or other appropriate action.

Condensed Summary of the Draft Supplemental Environmental Impact Statement Comment Analysis

The following is a brief summary of the public comments and analysis for the *Draft Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old Growth Forest Related Species Within the Range of the Norther Spotted Owl.* A detailed description of the public comments and analysis can be found in the final supplemental environmental impact statement released in February 1994.

The Bureau of Land Management was invited to comment on the draft supplemental environmental impact statement along with other state and federal agencies, interest groups, and the public. Public hearings were also held in Oregon, Washington, and California; these hearings received testimony or written comments from 359 individuals. The BLM participated in the coordination of these hearings.

During the 90-day comment period, 101,894 letters were received from all 50 states and several foreign countries. Approximately 40 percent of the letters came from east of the Mississippi River indicating that this issue extends beyond the three states affected.

The subjects that received the most substantive comments included allocations 17.7 percent; ecosystem 15.2 percent; silvicuture 9.8 percent; and economic effects 7.7 percent. Comments related to the BLM's draft resource management plans were 0.1 percent.

The comments indicate that feelings and issues surrounding the management of the national forests and BLM-administered lands in Oregon, Washington, and California remain intense and polarized.

People Who Commented on the Klamath Falls Resource Area draft Resource Management Plan/Environmental Impact Statement

Kathleen Abbott
Stefanie Abrishamian
A. Angelica Adams
David Adams
Deborah Africa
Don Alder
Brad Alende
David & Linda Allaway
Diane Allen
Max Alper
David Altmann
Kay Amog
Sherman D. Anderson
Betty C. Anderson
Charles Anderson
Donna Anderson
Jennifer Anderson
Kathleen Anderson
Richard Anderson
Lucy Andrade
Mark Apman
Doris Argile-Johnson
R. M. Arthur
Louise Austermuehce
Fred Austermuehle
Codie Austin
Garaldine Austin
R. Hunter Austin
Claire Avile
Sonia Back, RN, PHN
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Marilyn Bailey
Vava Bailey
Cynthia Baird
Jennifer Bamesberger
Walter Bammann
Deanna C. Barbaria
David Barlow
Ken Barnes
Crissy Barnett
Michael Baron
David Bauman
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Patricia Baumann
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Larry Bazor
Charles A. Beazell
Bill Bechen, Sr.
Beverly Beck
Keith Bedard
Stacy Beinil
Cami Bell
Heather Bell
Talley Bell
Larry Bellinger
Richard Bement
Ben Beway
Randy Benson
Bruce Benter
Lela Bentley
Joanne Benton
Allen Bergstrom
Lyle Bergstrom
Patricia Bergstrom
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Bub Bernstein
Glenn Biehl
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Molly Bricca
Charles Bridges
Robert Brocin
Cindy Brozik
Greg Brooks
Cindy Brougher
Benjamin Brown
Terry M. Brown
Daniel Buckley
Daniel Buckley III
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Kenneth Burkholder
Kim Burnett
Alan Burroughs
Daren Burt
Philip Bush
Tony Bushnon
Walter Byron Jr.
D. Cabell
Karen Cabron
Tamera Campbell
Lee & Jim Candell
Ernest Carlson
Priscilla Carlson
Jim Carpenter
Tom Carroll
Ellen Case
Thayer Case
D. Caulen
Denise Cavals
Harriet Charney
Linda K. Charpl
Jo Chase
Ming Cheng
Hilde K. Cherry
Steven D. Chinn, Sr.
Nancy Christian
Marguerite Christoph
John O'Hara Church
William Clancey
Julie Clark
Stacie Clary
Bob Claypole
Fred Cleaves
Joanne Cleland
Kim Cleveland
Larry Cleveland
Bonnie Cloyd
Ken Coany
Holly Cochran
Sally M. Cochran
Robert Coe
Chet Collins
Forrest Collins
Michael Collins
Frank Colver
Mrs. G. Commons
Margaret Conard
Candis Condo
George B. Conlan
A. Bernard Conley
Wendy Conner
Curt Conover
Stanton Cook
Linda Alper Cooney
David Coons
D. M. Cooper
Sandy Copeland
Duane Cornell
C. Cotta
Nancy Coughlin
John Crabbe
Roger & Chris Cranston
Daniel Crawford
Kathleen Crawford
Les Crawford
Max Creasy
Katrina Cross
William Cross
Constance Crown
Terry Cuff
Boris Cummings
Randall Curtis
Tom Curtis
Wanda Custance
Patricia J. Cutler
Liz Daeges
Veronica Daggett
Craig Dahl
Steven Danaher
Steve Dangberg
Steven M. Daniels
Don R. Davidson
Jerry Davis
Patricia Davis
Roland Davis
Ellen Day
James A. Day
Kathaleen De Salles
Leslie Degroff
Richard Demarest
Willow Denker
John Denning
Zachary Denning
James Denoon
Sara D. Denzler
C. Derbyshire
San DeSalles
Elaine Deutschman
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Douglas Dilts
Patricia Diluzio
Robin Dinick
Elan Doan
K. Doldt
Gary W. Dolgin
Michael Dolin
Tevis Dooley
Carol N. Doty
Dottie & James Dougher
Don Douglas
Ann McFarland Draper
Dr. Howard Druelen
Lynea Dubesky
Miss L. Dubesky
Deb Duhl
Fredric C. Dunlap
Nancy L. Dunlap
Christine Dwyer
Kathleen Dwyer
William Eadie
Mitchell Early
Robbie Earon
Joseph Ebersole
Deanna Ebert
Constantina Economou
Jeffrey Edwards
Gaar Edwards, DMD
Lorance Eickworth
Daniel Elbaum
Pat Elliott
Rex Elliott
Cal & Alice Elshoff
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Jeffrey D. Erickson
Kent Erskine
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Donald Evanson
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Bruce Feingold, PH.D.
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Carola Fellenz
Robert Feraru

Dennis Fincheyer
Ken Fischer
Raymond Fischer
David Fisher
M. J. Fitzgerald
Michael J. Fitzpatrick
Kendra J. Flaherty
Mark S. Flanders
Bob Fondren
Gary Fondren
Thomas Force
James D. Fox
Bruce Free, D. O.
Cathy Freeman
Liz Frenkel
Robert Frescura
Steven L. Fross
Dr. Kurt Fuerstenau
Lana Fuller
Roger Funk
Mark Gaffney
Megan Gahn
Gerald Gallmeister
Cole Gardiner
J. M. Garvey
Lauren Gausten
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Mrs. James Gerstley
Bruce Gethul
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Merle W. Hague

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Jo Hanson
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Shelly Kanes
Chris Karas
Abhisok Katiyar
Joanne Katzen
Gail Kauffman
Helen Kauffman
Jermy Kauffman
Matina Kauffman
Matt Kauffman
Zac Kauffman
Jenny Keegan
Aaron Keller
Larry Keller
Mary Kellis
Jeffrey Kellogg
Billie Kennedy
Eldon H. Kent
Eletheah Kesarah
Robert Kimble
Jeanette King
Lawrence King
Gisela Kinney
Clayton Kirkwood
Gary Kish
Kelvin H. Klink
Patti Klink
Abigail Klips
F. J. Knab
Don Knauer
Audrey Knott
David Knott
K. Koshgarian

Kirston Koths, PhD
Fred Krasner
Karen Kuehne
Melanie Kuhnel
Ron Kuhnel
Ena La Ferniere
Robert La Ferniere
Laura LaBerry
Acacia Lacy
Doug LaFarge
Mary E. Lamb
Sherman Lamb
Francis Landrum
Daniel Langenthal
David Langley
Norma M. Lavis
Gary Leaverton, MD
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Lynne Ledbetter
Jeff Lee
Paul Lee
Dick Leever
Frank Leidman
Peter Lenhardt
Brian Leslie
Raymond Levesque II
Samuel Levi
Mark Levinson
Bernie Levy
Cindy Levy
David Lewis
Kenneth B. Lewis, M.D.
Christina Lilienthal
Ronald Lilley
Robert Lipp
Victoria Little
Cecelia Littlepage
Diane Livoti
Frank Logorio
Dan Loll
Connie Lonsdale
Bruce Lorange
Linda Loretz
Wyatt Lotz
Iris J. Loux
Jason Love
Dave Lueders
Ken Lund
Colin Lynch
John Lynch
Jesse Lyon
Judy Mabey
Valerie Magee
Nadine Malcolm
Maggie Malone
Josh Maltsberger
Barbara H. Mangla
Debbie Mar
Jewels Marcus
Mary Markus
Jewel Marques
Carolyn Martin
Deborah Martin
Jim Martin
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Ed Mason
G. L. Masters
Joseph N. Mateen
James Mathwis
Alan Matsuno
Jeannie Matthews
J. Michael Matthews, M.D.
Kip Mauldin
Linda May
James McCall
Francis McCarter
Mavis McCormic
Carol McCollough
Mary L. McDonnell
Malcolm McDuffie
Bill McGinnis
Diarmuid McGuire
Rich McIntyre
Michele McKay
Julie H. McKee
Margaret McKinsey
Hazel McMenamy
Marleen McNabb
Dave McTeague
Jeannine Mealey
Ben Edward Meek, M.D.
Michelle Mehlhorn
Werner Meier, M.D.
Dorla Menmuir
Peter Mennen
R. Kurt Menning
Mark L. Metcalf
Tim Metz
Chris Meurer
Fred Meyer
John Meyer
Todd Meyer
Hildy Meyers
Howard Meyerson
Brigitte Micmacker
James Milestone
Clark Miller
Rodney Miller
Richard Mills
Steve Mimnaugh
Jerry Misener
Kristin K. Mitchell
Linda Mitchell
Pat Mitchell
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George & Elda Moniz
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Dawn Moore
Jack Moore
Mikala Moore
Stacey Moore, M.D.
Rita Moravcsik
James Morgan
Alan Moritis, M.D.
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Anne Mousseau
Marianne Moutoux
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Oscar R. Nealy
Sid Nejo
Jack Nelson
Ken Nelson
Dale Nesbitt
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Pamela Netzow
Robert F. Newbold
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Andrew Noble
Suzanne Nolan
Richard P. Norman
Mary Ellen Noyes
Mari Anne O'Banion
Jennifer O'Connor
Joseph O'Connor
Terence K. O'Neill
Robert Oliveria
Anne Olsofka
Linda Ortiz
Thomas Osborn
Vicki Osborn
George Ostertag
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Russell Park
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Naomi Parker
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Jerry Parsons
Paul Passien
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S. Reynolds
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Bryce Rice
Jane Richardson

John Richardson Jr.
Peter L. Richen
Stephen P. Rickles
Cindi Riddle
J. Randall Riddle
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Joseph T. Riker
June Ringer
M. Rinilal
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Gene Robbins
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Stephen Roberts
Mark Roberts, M.D.
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Judy Simmons
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R.D. Smith
Rachel Smith
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George E. Somberlin
Judith Somers
Janet Sommer
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Loren Spector
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Ben St. John
Charles Steadman
Allen Steck
Dr. Daniel Steinberg
Sheri Steiner
Albert Stetz
Edward Stewart
Janet Stewart
Michael Stewart
Josh Strange
Don Strasser
Robert Straub
Evelyn Strauss
Phil Studenberg
Ryntha O. Sturges
Phil Stuthemy
Colleen Sudekum
Suenful
David Sugerman
Ryan Sullivan
Dale L. Summons
Sue Summons
Michael Sundermeyer

Nina Sutcliffe
Barbara Be Szerlip
J.H.T.
Donald Teague
Kelly Teevan
Miguel Tejada-Flores
Greg Thomas
Thornton Thomas
James Thomson
Harold W. Thorne, Jr.
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Thomas E. Tinsley, Jr.
Kathy Tomyris
Liana Torresola
Liz Townes
Cherice Treasure
Barbara Tripod
John Tripp
Tom & Chitra Turner
Kathryn Uhtoff
John Jay Ulloth
Roger Urilakas
Wendy Uyels
Lynn Valeri
R.W. Van Alstyne
Bryon Van Fleet
Louis Van Patten
Grant Van Peit
James Vander Steen
Frank Vaughn
Jon Vermouth
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Radha Vignola
Henry Vinton
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Scott Voorhies
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Dick Walker
Herb Walker
Sherry Walker
Catherine Walling
Jeff Wasielewski
Bruce Waugh
Jon S. Wayland
Hazel Weaver
Jack Weber
Marcia L. Weber
Linda Welsh
Robert Welsh
Richard C. Werich
Charles West
H.J. Whitaker
Bruce W. White
Dennis White
Lynn White
Bryce Whitmore
Pamela Whyte
Carl Wikander
Norma Wilcox
Eric Wilder
Mitchell Wilks
Chuck Williams
H. Williams
Roxanne J. Williams
Tom Willis
Wendy Willis
Kathrine Wilson
Lloyd Wilson
Marty Wilson
Ron Wilson
Sara Leigh Wilson
David Wimphieimer
Donald B. Winn
Marian Wisham
Jeff Wishard
George Wolfberg
Becky Wood
William M. Wood
Ayn Woodruff, M.D.
Ross Wootan
Chris Wrench
Melinda Wright
Eleanor Wynn
Gino Zalunardo
Sandra Zaninovich
Stephanie Zimmermann
Ben Zuckerman
Ralph Zusman
Maribeth G. Zwick

Anasazi Productions
Association of O&C Counties

Associated Oregon Loggers, Inc.
Audubon Society
Audubon Society of Portland
Bigfoot Outdoor Company
California Federal Bank
California Outdoors
Cascade River Runners
Champion Securities Corporation
City of Klamath Falls
Concerned Friends of the Winema
Defenders of Wildlife
Deja, Inc.
Deschutes County Board of Commissioners
Factfinders Newsletter
Friends of the River
Global Youth Academy
Good Work in Support of the Common Good
Grubb & Ellis Company
Headwaters
Hoover Institute on War, Revolution, & Peace
Karuk Tribe of California
Keck Science Center/Claimont Colleges
Klamath Basin Audubon Society
Klamath Basin Snowdrifters Snowmobile Club
Klamath Basin Waterfowl Association
Klamath County Board of Commissioners
Klamath County Chamber of Commerce
Klamath County Farm Bureau
Klamath County Local Resource Task Force
Klamath County Parks
Klamath County Trails Committee
Klamath Fast Trekkers
Klamath Union/Mazama High Schools
Lower Columbia Canoe Club
McKenzie River Guides Assoc.
Mad River Canoe Company
Mazamas Conservation Committee
Modoc Lumber Company
National Wildlife Federation
Native Plant Society of Oregon
Noah's World of Water
Northwest Coalition for Alternative to Pesticides
Northwest Forest Resource Council
Oregon AFL-CIO
Oregon Forest Products Trans. Assoc.
Oregon Hunter's Association
Oregon Lazer Consultants
Oregon Logging Conference
Oregon Natural Resources Council
Oregon Waterfowl and Wetlands Association
Oregon State Senate
Pacific Northwest Four Wheel Drive Assoc.
Park Place Real Estate
Parker & Bush Attorneys
Public Lands Foundation
Rainland Fly Casters
Rogue Valley Audubon Society
S. O. A. R. (S. OR. Alliance for Resources)
Sacramento River Council
Sanctioned Outers
Save Our Klamath Jobs
Save Our Klamath River
Save the River
Select Development/Construction
Sierra Club, Oregon Chapter
Sierra Club, San Francisco Bay Chapter
Sierra Mac River Trips, Inc.
So. Oregon Business Alliance, Inc.
Southern Oregon State College
State of Oregon, Governor's Office
Survival Center, University of Oregon
Swisher Fly Fishing
The Adventure Center
The Ashland Spa
The Klamath Tribe
The Nature Conservancy
The Pacific Rivers Council
The Wilderness Society
The Wildlife Society
The Williamson River Club
Timbers Motel
Traveling School Class
Turtle River Rafting Company
U.S.Environmental Protection Agency, Region 10
U.S. Fish and Wildlife Service
U.S. Forest Service, Pacific Northwest Region
Unlimited Pheasants
Western Aquatic Turtle Research Consortium
Western Forest Industries Association
Weyerhaeuser Company
Whitewater Voyages
Williamson River Flies

Appendix Z

Comment Responses and Reprinted Letters

Introduction

This appendix has two main sections. The first major section contains comments from the public that were responded to by BLM staff. The comments come in two forms; the first are comments that have been distilled down to their basic intent because they were made repeatedly, and the second are comments that are very specific to the Klmath Falls Resource Area. This second group of comments were left mostly intact to answer very specific concerns. The other major section of this appendix includes reprinted letters. To help the reader find a particular topic, a table of contents is provided followed by the comment/responses.

Table of Contents

Scoping 4
State Director Guidance 4
Purpose and Need 5
Budget Assumptions 5
Organization of Document, Editing, and Maps 6
Planning Schedule 7
Coordination with Other Parties 7
Goals and Objectives 8
The Preferred Alternative 8
Legal Consistency of the Preferred Alternative 8
The No Action Alternative 10
New Alternative Proposals 10
Impact Analysis Generally 11
Air Resources 14
Soils/Site Productivity 16
Water Resources 20
Biological Diversity 32
Old Growth Forest 37
Ecosystem Management 39
Vegetation 40
Riparian Zones 42
Wildlife 49
Fish 58
Special Status Species 60
Spotted Owl 68
Special Areas 73
Cultural Resources 73
Visual Resources 75
Wild and Scenic Rivers 75
Recreation 78
Timber - Management Direction/Practices 80
Timber - Productivity/Sustainability/Forest Health 84
Timber - PSQ 85
Timber - Inventories 88
Timber - Demand, Supply, and Market Effects 89
Energy and Mineral Resources 90
Livestock Grazing 91
Land Tenure 99
Access 100
Roads 100
Fire 102
Socioeconomic Conditions 103

Rural Interface Areas 111
Consistency with Other Agency Plans & Programs 112
Requirement for Further Environmental Analysis 113
Use of the Completed Plan 115
Monitoring 116
Miscellaneous Klamath Falls Comments/Responses 120

Comment Responses

Many of the comments on the adequacy of the Draft Resource Management Plan/Environmental Impact Statement addressed specific elements of the Preferred Alternative that are no longer components of the proposed plan. Where the proposed plan had a corollary element, our responses to such comments treated them as if they applied to the corollary allocation. The most common example is comments on Old Growth Emphasis Areas. Our responses to those comments treat them as applying to Late Successional Reserves in the proposed plan (Proposed Resource Management Plan).

The acronym "Supplemental Environmental Impact Statement", used in comment responses, refers to the 1993 *Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.* The term "FEMAT report" refers to the 1993 Report of the Forest Ecosystem Management Assessment Team, titled *Forest Ecosystem Management: An Ecological, Economic and Social Assessment.*

Many of the comments received during the comment period were somewhat generic in the sense that they applied commonly to all five Western Oregon districts and the Klamath Falls Resource Area. Where such comments were received a common answer was developed. In this appendix many of the Klamath Falls specific comments and the responses on a particular topic are mixed with the more generic statewide comment responses for that topic. In some cases, the answers to specific comments were not known until late in the process of preparing the final plan. In such cases those comments and responses were put into the Miscellaneous Klamath Falls section at the end of the appendix rather than in the section where the other similar comments and responses appear. For a complete look at a particular topic, the reader should look in the appropriate section (for example, the Special Areas section for areas of critical environmental concern) and in the Miscellaneous Klamath Falls section for other possible responses.

Scoping

1 **COMMENT** The BLM and State of Oregon should convene an independent commission to study the specific ecological and administrative problems arising from the current ownership pattern.

RESPONSE *Funding for such an initiative would have to be authorized by the Congress and the State legislature. Such a proposal is beyond the scope of the Resource Management Plan.*

State Director Guidance

2 **COMMENT** The State Director Guidance for the planning process should be amended to permit changes in the Preferred Alternative.

RESPONSE *The State Director Guidance, which was issued through a series of instruction memoranda during the years 1988 through 1992, did not directly address the formulation of the Preferred Alternative, and did not preclude changes in that alternative. The State Director never intended it to formally guide that aspect of the process and it did not direct any discretionary allocations or constraints in the Preferred Alternative. It has also not guided development of the Proposed Resource Management Plan.*

Purpose and Need

3 **COMMENT** The Resource Management Plan/Environmental Impact Statement should acknowledge the purpose of the Oregon and California Lands, which is to be managed for the stability of local communities and industries through the production of timber, under the principles of sustained yield, and should also reference important related judicial decisions.

RESPONSE *Chapter 1 has been expanded, but citation of specific judicial decisions seems unnecessary to the function of the Resource Management Plan.*

4 **COMMENT** The documents never spell out clearly what decisions will be made as a result of this analysis.

RESPONSE *The Chapter 1 discussion, Purpose and Need for the Action, has been expanded to refer to the planning questions in Appendix B and to Table 2-1 where these decisions are summarized.*

Budget Assumptions

5 **COMMENT** The Draft Resource Management Plan does not include a cost analysis of the alternatives. It should Include costs of all aspects of timber sales, such items as road building, sale preparation, monitoring, site cleanup, mitigation of environmental impacts, and restoration. Higher management costs would undoubtedly occur if the Preferred Alternative were adopted.

RESPONSE *Ecosystem management focuses on the many activities required to manage a specific geographic area. This type of management Is different from traditional program based management which focuses on costs and units of accomplishments in each individual program. For this reason cost comparison is limited to comparison of the total costs of the No Action Alternative and the Proposed Resource Management Plan (see chapter 2, Costs of Management).*

6 **COMMENT** Consider the unstable nature of federal funding of forest management activities and the difficulties of securing this funding.

RESPONSE *The Introduction to Chapter 4 has been modified to acknowledge this.*

7 **COMMENT** How does BLM expect to obtain funding to implement ecosystem management with reduced harvest levels and higher predicted costs?

RESPONSE *We expect the Congress will be able to look beyond the traditional measure of timber sales, understand the importance of ecosystem management, and appropriate adequate funding for its successful implementation.*

8 **COMMENT** Evaluate the impact of lower funding levels on programs and outputs, including mitigation and monitoring. How will accountability for funding mitigation and monitoring support be verified?.

RESPONSE *Since the essence of ecosystem management is balance, reduced funding levels would affect all programs and outputs proportionally. Mitigation and monitoring are considered to be part and parcel of timber sale and other implementation costs. In the priority setting process, managers will insure the integrity of program balance, including mitigation and monitoring, in the budget.*

9 **COMMENT** Review historic silvicultural plans, required budgets, approved budgets, activities conducted, and reasons for the differences.

RESPONSE *Much of what is requested demands an analysis of political decisions made at high levels of past administrations and/or during legislative deliberations in the Congress. Although the analysis would make an interesting if lengthy article, we believe it would suggest little about how such deliberations and decisions will come out in the 1990s.*

10 **Comment** The draft [KFRA] Resource Management Plan/Environmental Impact Statement states that "timber sale volumes and associated programs would be reduced if annual funding is not sufficient to support the relevant actions assumed in the plan." (page 2-76). We are concerned that the PA and alternative C will be costlier to implement since they both contain more nontraditional timber management approaches. The draft Resource Management Plan/Environmental Impact Statement indicates that for these two alternatives the costs of nontraditional timber management would be approximately 2.8 times higher per unit of timber sold than for the more traditional timber management alternatives.

The final Resource Management Plan/Environmental Impact Statement needs to describe in greater detail: how BLM funding levels are established each year; whether allocations are based solely on the amount of timber cut; whether each yearly allocation is "ear marked" for specific uses; and what effect this more costly nontraditional timber management will have on the funds available for a variety of nontimber harvest activities. The final Resource Management Plan/Environmental Impact Statement needs to describe in greater detail how a funding shortfall will affect the variety of activities included in this plan. Will all activities be cut back equally if funding is not sufficient? Do some management activities have a higher priority for completion than others? Will all resources be equally or adequately protected if funding is less than anticipated or needed?

Response *Ecosystem management focuses on the many activities required to manage a specific geographic area. This type of management is different from the traditional program based management which focuses on costs and units of accomplishments in each individual program. For this reason cost comparison is limited to comparison of the total costs of the No Action Alternative and the Proposed Resource Management Plan (see Chapter 2, Costs of Management).*

Since the essence of ecosystem management is balance, reduced funding levels would affect all programs and outputs proportionally.

Organization of Document, Editing, and Maps

11 **COMMENT** It was difficult to distinguish the draft Resource Management Plan from the draft Environmental Impact Statement. For example, implementation standards were scattered throughout the document.

RESPONSE *Chapter 2 has been reformatted to clearly display proposed objectives and link them to management direction for each resource.*

12 **COMMENT** Avoidance of acronyms would make the document more readable.

RESPONSE *The use of acronyms has been reduced.*

13 **COMMENT** Moving the list of acronyms and abbreviations to the front of the document would help the reader.

RESPONSE *This change has been made.*

14 **COMMENT** On the maps more geographic places and towns should be shown and named, more streams named, and secondary roads indicated.

RESPONSE *The level of detail of geographic naming was limited so as not to clutter the maps.*

15 **COMMENT** Maps showing land allocations are too small a scale with few reference points.

RESPONSE *A reference grid has been added to the new Proposed Resource Management Plan maps. The scale is considered adequate for an environmental impact statement. For more detail, see maps available for review in the district office.*

Planning Schedule

16 **COMMENT** The final Resource Management Plan/Environmental Impact Statement and Record of Decision should not be completed before completion of Endangered Species Act consultation.

RESPONSE *We consider consultation on our Resource Management Plan already accomplished by the consultation and resultant biological opinion from the Fish and Wildlife Service on the Supplemental Environmental Impact Statement. Additional consultation will occur as project planning follows the resource management plan.*

17 **COMMENT** The deficiencies of the draft plan warrant BLM developing a revised or supplemental draft before proceeding to the final stage.

RESPONSE *The BLM, with the Forest Service, prepared a Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.*

Coordination with Other Parties

18 **COMMENT** If other federal lands are the key to success of an alternative, identify the related coordination and cooperation planned.

RESPONSE *Such coordination is addressed in the Supplemental Environmental Impact Statement Record of Decision.*

19 **COMMENT** The Confederated Tribes should be contacted for review of any activity permanently altering the land, minerals, vegetation on, or access to their aboriginal lands. The tribal office should receive copies of environmental assessments, FONSIs, EISs, and other notifications of actions.

RESPONSE *A Memorandum of Understanding, currently under development with the tribal government, will identify those activities that the Confederated Tribes will be contacted and receive official BLM documents about.*

Goals and Objectives

20 **COMMENT** It was difficult to identify plan policies in the Resource Management Plans. The Resource Management Plans should identify the expected future condition.

RESPONSE *Explicit Proposed Resource Management Plan objectives have been added for each topic in Chapter 2, to address these concerns.*

21 **COMMENT** There should be a stronger link between the plan's broad goals and the specific actions that will be undertaken. In general, standards and guidelines need to be established.

RESPONSE *The objectives that have been added for the Proposed Resource Management Plan provide that link and, along with management actions/direction, equate to standards and guidelines.*

The Preferred Alternative

22 **COMMENT** A table showing the acreage in each land classification would help the reader determine the significance of restricted areas.

RESPONSE *Allocations overlap so any table oversimplifies. See Table 2-1, S-1, or Figures S-1 and S-2.*

23 **COMMENT** The Resource Management Plan should use a watershed approach to land resource management.

RESPONSE *The Supplemental Environmental Impact Statement decision which has been incorporated into our Proposed Resource Management Plan details a four tier approach to land resource management: regional, physiographic or river basin, watershed, and site specific or project level. Under this approach, analysis starts at the watershed level. The planning units will be physiographic province or river basin, consisting of a number of watersheds. Watershed based planning will be implemented and, over time, the federal agencies including the BLM will switch from existing planning units to the provinces or modify the boundaries of current planning units to be more compatible with the watershed based approach.*

24 **COMMENT** The BLM's long-term projections are unreliable due to the vagaries of time and changing political and economic agendas. Adoption of any alternative should be a short-term action only.

RESPONSE *We recognize that the plan adopted will be replaced by one or more others within ten years or so. Yet, only in the long term can we attain many of the plan's key objectives, so much of the plan's focus remains long term.*

Legal Consistency of the Preferred Alternative

25 **COMMENT** The draft plans have not explained how ecosystem management in the preferred alternatives is consistent with BLM's legal mandate for Oregon and California/Coos Bay Wagon Road lands, including its community stability requirement.

26 **RESPONSE** *The Supplemental Environmental Impact Statement Record of Decision addresses this, and discussion has been added to Chapter 2, Purpose and Need, of this Proposed Resource Management Plan/Final Environmental Impact Statement.*

COMMENT The preferred alternative makes timber production the residual rather than the dominant use, because lands are first set aside for riparian and other uses, and the residual land is further managed for old growth restoration. This subservient position for timber violates the Oregon and California Act.

27 **RESPONSE** *Management of these lands under the Oregon and California Act mandate to provide a sustainable level of timber production must also be reconciled with other laws such as the Endangered Species Act and the Clean Water Act. The need of the local communities and industry for a stable timber supply is certainly of foremost concern in the management decisions for the Oregon and California lands. The selection of the preferred alternative or Proposed Resource Management Plan is our attempt to manage the Oregon & California lands in a responsible manner. Such management is intended to allow as high a level of sustainable timber supply as possible without risking further drastic curtailments in the timber supply in the future due to the requirements of a myriad other laws through which the BLM must chart its course. The mechanical Probable Sale Quantity calculation hierarchy may make it appear that timber production was the last concern in the decision-making process. This does not mean, however, that it was subsidiary to other uses of the timber lands.*

28 **COMMENT** Since the Alternative A level of riparian protection meets legal requirements, selection of that level of riparian protection would be most consistent with the Oregon & California Act.

RESPONSE *The level of riparian protection included in the Proposed Resource Management Plan was selected not only to meet current legal requirements, but also to promote the goals of watershed protection contained in the Oregon and California Act and to provide sufficient protection to reduce the potential for listing of aquatic species as threatened or endangered. Taking into consideration the anticipated benefits to the quality of watersheds in the Oregon and California Act, it does not necessarily follow that the alternative with the least riparian protection allowed by law is the "most consistent with the Oregon and California Act."*

29 **COMMENT** Lowering the minimum harvest age by releasing arbitrary constraints on it would seem be most consistent with the Oregon and California Act, particularly considering the difficult timber supply situation.

RESPONSE *While the Oregon and California Act does not set "arbitrary constraints" one way or the other about the rotation age or minimum harvest age of the timber, the purposes of the Oregon and California Act in providing a long term sustainable timber supply may be adversely affected by lowering the minimum harvest age. The level of sustainable harvest over the long term could be reduced if the minimum harvest age is significantly lowered below the age of the culmination of mean annual increment. Intensifying harvest activities of the lands included in the General Forest Management Areas by lowering the minimum harvest age could also have adverse effects on the quality of watersheds on the Oregon and California lands. Such results cannot be considered as "most consistent with the Oregon and California Act."*

The environmental impacts of harvesting much younger trees must also be considered. For example, lowering the minimum harvest age in the General Forest Management Area could have significant adverse impacts on the ability of protected species such as the northern spotted owl to disperse throughout their range, and possibly cause the BLM to violate the Endangered Species Act.

30 **COMMENT** The exclusion of Oregon and California forest land from exchange for lands to be managed for single use management purposes relative to listed species appears to conflict with Section 7(a)(1) of the Endangered Species Act.

RESPONSE *Congress in Section 7(a)(1) did not direct the Secretary to ignore the limitations in statutory authorities for other Interior programs when it directed the Secretary to use these authorities to further the purposes of the Endangered Species Act. The Oregon and California Act requires those lands to be primarily managed for timber. The BLM would violate its statutory authority under the Oregon and California Act for the management of these lands if we were to exchange Oregon and California timberlands for property intended for use primarily as wildlife habitat. See Headwaters v. BLM, 914 F.2d 1174 (9th Cir., 1990). Thus, the proposal to exclude the Oregon and California lands from exchanges for lands intended for purposes other than multiple use does not conflict with the promotion of conservation of listed species under §7(a)(1), since that section does not require agencies to violate their existing statutory authorities to accomplish its purposes.*

The No Action Alternative

31 **COMMENT** The No Action Alternative should be no activities.

RESPONSE *It is well established that in land-use plan environmental impact statements by federal land management agencies, the No Action alternative is continuation of the existing plan. According to the Council on Environmental Quality in an action updating a land management plan where an ongoing program under existing legislation is taking place, the "No Action" Alternative is the alternative of "no change" from current management direction or level of management intensity. "To construct an alternative that is based on no management at all would be a useless academic exercise." (Answer to Question 3 of Council on Environmental Quality's "National Environmental Policy Act's Forty Most Asked Questions", 46 Federal Register 18026 (Mar. 23, 1981), as amended.)*

32 **COMMENT** Note the current level of survey, monitoring, and inventory which is done regularly.

RESPONSE *Monitoring under the current plan is described in Oregon State Office Manual handbook H-1734-1, 162 pages long. Survey and inventory procedures are equally detailed, by resource. Copies of these procedures are available for review in the Resource Area office.*

New Alternative Proposals

33 **COMMENT** Assess alternative harvest priorities that maintain more options for the "old growth" in the general forest management area. Include alternatives that rely more on partial cuttings.

RESPONSE *The Proposed Resource Management Plan harvest priorities in the general forest management area have been prorated so most old growth there would be intact after the first decade. Partial cuttings (including thinning and density management) have been incorporated into the Proposed Resource Management Plan to the extent consistent with both ecosystem management and timber management objectives.*

34 **COMMENT** It is recommended that the BLM add a fisheries emphasis alternative. It would be based on the Alternatives for Management of Late Successional Forests in the Pacific Northwest.

RESPONSE *An integral component of the (new) Proposed Resource Management Plan is fisheries emphasis.*

35 **COMMENT** Evaluate the effects of longer rotations and higher minimum harvest ages on all lands administered by the BLM.

RESPONSE *Sensitivity analysis of Alternative B in the Draft Resource Management Plan/Environmental Impact Statement looked at 150-year rotations. Sensitivity analysis of the draft Preferred Alternative looked at no harvest below culmination of mean annual increment.*

36 **COMMENT** Develop and analyze other alternatives which retain biologically significant old growth stands while still producing economic opportunities.

RESPONSE *Alternatives C, D, E, and the Proposed Resource Management Plan, as well as all other alternatives analyzed in the recent Supplemental Environmental Impact Statement, all do this to varying degrees. We do not believe adding more such alternatives would be particularly useful.*

Impact Analysis Generally

37 **COMMENT** A ten-year short-term impact time frame is not equally appropriate for all resource categories. Consider varying according to the life spans of affected biota.

RESPONSE *The ten-year period was selected as the end of the period before the Resource Management Plan is most likely to be revised. Keying to the life-spans of affected biota is more relevant to a project environmental impact statement, such as for a dam or oil and gas leasing. Where available information suggest that intermediate term impact conclusions would be substantially different than the trend implied by short-term and long-term conclusions, that has been acknowledged.*

38 **COMMENT** Assess spatial feasibility of the harvest plan in future decades.

RESPONSE *A major constraint on spatial feasibility in the BLM's checkerboard ownership pattern is harvest activity on other ownerships, particularly private land. Future harvests on private lands are often not the subject of long-term plans, often proprietary even if plans exist, and subject to rapid change due to market conditions, changes in ownership, and other business considerations. Even spatial feasibility of the ten-year scenario is speculative, given these considerations, and must be revisited during annual timber sale planning. The elaborate exercise entailed in extending the ten-year scenario out several decades would prove little.*

39 **COMMENT** In some parts of the document, private lands are excluded from consideration, while in others the BLM appears to be using private lands for mitigation.

RESPONSE *In no case does the BLM suggest that it can control activities on private lands, except for the indirect control that may occur where specific access across BLM-administered land may be denied due to overriding environmental constraints such as the Endangered Species Act. Expected management on private land, however, is sometime cited as providing certain consequences, for example, adequate elk forage.*

40 **COMMENT** Identify where private land management is hindering the achievement of ecological objectives.

RESPONSE *Our assumption is that all private forest management, whatever it is today, may become short-rotation intensive forest management. That is the basis for all cumulative effects analysis. The BLM's ecological objectives reflect that assumption.*

41 **COMMENT** Soil erosion, watershed degradation, stream sedimentation, and forest habitat destruction must all be analyzed with adjacent lands factored in.

RESPONSE *Soil erosion (soil loss as distinguished from stream sedimentation) is a site specific concern; cumulative effects of soil loss with other ownerships are not relevant to the BLM's management decision. The balance of these concerns are addressed broadly in the environmental impact statement and will be more specifically addressed in watershed analyses.*

42 **COMMENT** Consideration for catastrophic loss should be factored into the plans.

RESPONSE *Projections of catastrophic loss have been explicitly factored into the proposed probable sale quantity and into analysis of effects on old growth. Adaptive management will address the locally unpredictable dimensions of catastrophic losses.*

43 **COMMENT** The BLM has not done a risk analysis and developed contingency plans for old growth emphasis areas and CAs that potentially could be destroyed by a catastrophic event.

RESPONSE *As is discussed in Appendix O of "A Conservation Strategy for the Northern Spotted Owl" (1990), the original habitat conservation areas suggested in that document were distributed so as to hedge against catastrophes that could cause regional but not total extinction of the spotted owl. The late-successional reserve system is similar. The Draft Recovery Plan and the Supplemental Environmental Impact Statement both specifically address catastrophic loss of habitat. The dispersal of connectivity/diversity blocks will also function as a hedge against major ecosystem impacts from catastrophic events. Risk analysis was incorporated into the regional Supplemental Environmental Impact Statement. Contingency planning would have to be based on a multiplicity of "what ifs". We consider it more relevant to adapt our management as appropriate after a specific catastrophic event occurs.*

44 **COMMENT** The environmental costs of relying on foreign, non-sustainable resources for forest products has been overlooked. The plan also ignores the other environmental costs — higher energy consumption, increased carbon dioxide emissions, accelerated depletion of nonrenewable resources — of relying more on substitute building materials.

RESPONSE *Assessment of the environmental costs of substitute sources of timber or substitute building materials would entail much conjecture about international markets and is beyond the scope of a single Resource Management Plan Environmental Impact Statement. We are aware, however, of some regionwide analyses of this topic, and discussion of them has been added to chapter 4, Socioeconomic Conditions.*

45 **COMMENT** Identify the economic, recreational, commercial, and aesthetic values of key wildlife groups or species.

RESPONSE *Recreation and aesthetic values are not distinguishable and are incorporated in the Environmental Impact Statement sections on recreation. Stratification of values by key wildlife group or species is not practical due to lack of consistent, comparable sets of data. Some economic and commercial values of game animals and fisheries have been indirectly captured through the analysis of recre-*

ation-dependent and fisheries-dependent personal income and employment. We recognize that these analyses do not capture all of the values associated with key wildlife groups or species.

46 ***COMMENT*** Wildlife tree retention causes increased operational costs and safety risks, which have not been adequately analyzed.

RESPONSE *In the Proposed Resource Management Plan, a series of stand structural classes have been designed to meet a variety of resource management objectives and to produce stands with desired characteristics over time. An integral part of the structural class is retention of snags and green trees. Worker safety would not be compromised to achieve resource management objectives. Retention of snags and green trees for wildlife or other objectives does increase operational costs as compared to the complete harvest of stands. However, average costs for snag and green tree retention under the Proposed Resource Management Plan would not be expected to be much different than costs required to complete shelterwood harvests, perform overstory removals and partial cut harvests while retaining wildlife trees under the plan for the 1980s.*

47 ***COMMENT*** Identify the cultural and subsistence needs of Indian tribes or nations and how well the Preferred Alternative meets these needs.

RESPONSE *The identification of the "cultural and subsistence needs of Indian tribes or nations" at any point in time is a difficult undertaking. Each tribe or nation may define these needs quite differently. In addition, these needs change over time as does the situation in which Indian tribes or nations find themselves.*

We intend to take the needs of Indian tribes or nations into consideration. However, the identification of these needs is of necessity a shared responsibility. Therefore, we and the tribes must jointly develop a process whereby information concerning the interests and needs of each tribe or nation is shared. The Memorandum(s) of Understanding presently in development with various tribes constitutes an important step in this process of information sharing.

48 **COMMENT** If helicopter use is an option for accessing and harvesting timber sales, include a discussion of noise impacts.

RESPONSE *Discussion has been added in Chapter 4, Recreation and Rural Interface Areas.*

49 **COMMENT** For existing or proposed livestock grazing permits, analyze effects on water quality, condition and management strategies for riparian zones and watersheds, impacts on biological diversity, special status species in grazing allotments, cumulative effects of grazing and other management activities, and proposed livestock improvements.

RESPONSE *These issues have been addressed in the Klamath Falls Resource Area Proposed Resource Management Plan/Final Environmental Impact Statement. See Chapter 4 for more details.*

50 **COMMENT** Effects of insects and diseases, other than on timber production, are hardly mentioned.

RESPONSE *Discussions of forest health have been added to both Chapters 3 and 4, Biological Diversity and Ecological Health.*

51 **COMMENT** Finally, your [KFRA] plan ignores the cumulative effect of the growing number of constraints on timber harvesting from private and public forests across the nation.

RESPONSE *Cumulative effects are addressed in the Supplemental Environmental Impact Statement as well as the Socioeconomic Conditions section of Chapter 4 of this Proposed Resource Management Plan/ Final Environmental Impact Statement .*

52 **COMMENT** Page 2-65 [of the KFRA draft Resource Management Plan/Environmental Impact Statement], Harvest of Juniper Woodlands. The final document should be expanded to include a detailed discussion of the anticipated impacts associated with the conversion of Juniper woodlands.

RESPONSE *The Proposed Resource Management Plan/Environmental Impact Statement has had discussions added as needed on the anticipated impacts to other programs due to increased removal or thinning of juniper.*

53 **COMMENT** Much of the biodiversity discussion in Chapter IV focused on forests, with a seemingly disproportionate amount of attention on the west side forests that have spotted owl habitat. While old growth forests are important resources in the Resource Area there are considerably more acres that are not these types of forests or even forests at all. These lands need to be addressed for biodiversity needs as much as the west side forests in the Resource Area.

RESPONSE *It is true that the discussion of the effects on biological diversity seems to emphasize west side forest communities, and this is a reflection of the larger amount of data resulting from the concentration of research efforts on these communities. However, the subsections of the Species Diversity section on livestock grazing, fire management, and early and mid seral stages and portions of the Ecosystem Diversity and Landscape Diversity sections address effects to non-forest community types. Additionally, portions of the summary of the effects of each alternative on biological diversity discuss effects on non-forest communities.*

Air Resources

54 **COMMENT** Ten years is not an appropriate time frame for assessing effects to air quality. At a minimum short-term air quality impacts should be analyzed under the shortest practicable period of time related to the implementation of specific activities.

RESPONSE *The short-term air quality impacts identified are actually average annual impacts throughout the ten-year forecast period.*

55 **COMMENT** Statements that air quality management will be in compliance with applicable laws and regulations do not inform the decision maker or the public of *how* the Districts will be in compliance and the projected impacts of prescribed fire emissions.

RESPONSE *Chapter 2 has been revised.*

56 **COMMENT** Various terms, such as nonattainment and designated areas, are used in the text without definition. These terms must be understandable by the public, and must be used consistently between Districts.

RESPONSE *These terms are included in the glossary.*

57 **COMMENT** Smoke sensitive areas on the maps need to be labelled, and each district plan should identify which areas are most likely to be affected by that district's prescribed fire activities. This discussion should also include why each areas has been designated.

RESPONSE *The air quality discussions have been revised.*

58 **COMMENT** The final Resource Management Plan should discuss all the applicable regulatory and/or permit requirements, including National Ambient Air Quality Standards, Prevention of Significant Deterioration, and visibility impairment in Class I areas. The Oregon Smoke Management Plan also needs to be fully described, as well as its relationship to the State Implementation Plan.

RESPONSE *Chapter 3 has been revised.*

59 **COMMENT** The Draft Resource Management Plans include reference to the BLM's smoke surveillance for intrusions. What is this, what does it measure, and how are intrusions reported? What are the District's contributions to reported intrusions? What further monitoring standards and methods will the BLM use to measure compliance with the Clean Air Act and State Implementation Plan standards?

RESPONSE *The air quality discussions have been revised.*

60 **COMMENT** The Draft Resource Management Plan assumes uniform burning conditions across the Districts. These differences need to be fully disclosed in the Final Resource Management Plan.

RESPONSE *The air quality discussions have been revised. Additional consideration of these differences are more appropriately addressed at the watershed or province planning levels, as identified in the Supplemental Environmental Impact Statement. Fire management plans completed at those levels will include methods most appropriate for their specific geographic areas.*

61 **COMMENT** A more complete comparison is needed between regulated pollutants and expected emissions, especially Particulate Matter 10.

RESPONSE *The air quality section of Chapter 3 has been revised.*

62 **COMMENT** The types of use of prescribed fire in the Resource Management Plan need to be identified and fully discussed. Particularly, the dispersion conditions of low-intensity fire need to be discussed along with potential impacts to air quality.

RESPONSE *The air quality discussions have been revised.*

63 **COMMENT** More thorough analysis of emission reduction techniques and alternatives to the use of prescribed fire is necessary in the Final Resource Management Plan.

RESPONSE *The air quality discussions have been revised.*

64 **COMMENT** The Final Resource Management Plan needs to disclose potential impacts to persons in the Rural Interface Areas.

RESPONSE *The air quality section, Chapter 4, has been revised.*

65 **COMMENT** The analysis needs to include consideration of more complete utilization of slash materials as an alternative to broadcast burning.

RESPONSE *The air quality discussions have been revised.*

66 **COMMENT** The Final Resource Management Plan needs a discussion on the decision process of using prescribed fire.

RESPONSE *Chapter 2 has been revised. Additional rationale can be found in the Supplemental Environmental Impact Statement.*

67 **COMMENT** The impact of the District's firewood program on neighboring communities' air quality needs to be considered.

RESPONSE *The air quality section of Chapter 4 has been revised. The amount of available firewood is expected to decline sharply, due to decreased timber harvest levels and increased retention of coarse woody materials for ecosystem management objectives, including wildfire requirements.*

68 **COMMENT** Another example of the problems caused by the BLM's lack of cooperative planning pertains to air quality issues. Klamath County has serious Environmental Protection Agency air quality problems due to smoke from wood fires. The County has worked diligently to address these problems in its local implementation plan which has not ever been acknowledged in the BLM's Resource Management Plan/ Environmental Impact Statement process in spite of the fact that the Preferred Alternative would add 17 tons of fuels to be burned.

RESPONSE *The Air Quality discussions have been revised.*

Soils/Site Productivity

69 **COMMENT** Address ways to reduce soil compaction.

RESPONSE *Soil compaction is an unavoidable adverse impact when heavy equipment is permitted on the land. However, the Proposed Resource Management Plan has adopted a series of best management practices (Appendix F) that are designed to prevent or mitigate the effects of compaction. Additional mitigating measures are employed on a site by site basis to reduce compaction and the subsequent productivity losses, soil erosion, siltation, and increased peak flows. Productivity losses due to soil compaction will be limited to percent or less where ground based equipment is employed.*

70 **COMMENT** The BLM should reduce or eliminate broadcast burning because burning reduces site productivity, increases erosion, kills small trees, reduces mycorrhizae, and damages adjacent timber lands.

RESPONSE *Broadcast burning is used for several purposes including providing planting sites for seedlings, controlling competing vegetation, and to reduce the risk of wildfire. Logging slash, when left untreated, can burn very intensely under wildfire conditions. Best management practices have been used since the 1980s, to reduce the impacts on site productivity due to broadcast burning. Refer to the appendices for current best management practices on broadcast burning. Alternatives to broadcast burning such as hand piling and burning, lopping and scatter of limbs, and cutting of planting holes in slash are also used where feasible. Broadcast burning is one of several tools used for site preparation and will* *continue in the future. However, broadcast burning levels will decrease due to changes in harvest practices and other resource management objectives and constraints.*

71 **COMMENT** Protective standards for potential landslide areas have not been described. Provide information regarding slope stability which is needed for, among other things the location of waste disposal sites.

RESPONSE *The BLM's intensive Timber Production Capability Classification inventory, classifies areas based on soil and site susceptibility to degradation from timber management activities. Fragile soil areas were identified at two degrees of susceptibility to management activities. One was the identification of areas where management activities would result in detrimental impacts to soil/site productivity and/or potential off site impacts. An example of this is the Timber Production Capability Classification category, Fragile Ground Non-Suitable Woodland, which identified the areas of potential landsliding that could enter waterways. These sites were designated as "nonsuitable woodlands" and will be managed to protect and enhance their non-timber values. The second grouping of fragile sites is the "fragile suitable commercial forest land". These areas have been identified to be fully capable of timber management without site deterioration or off site impacts when best management practices (see Appendix F) are used to protect and mitigate impacts from management activities. During site-specific planning, in addition, on-site investigations are conducted on these lands so we can avoid areas subject to landslides or provide adequate protection to limit their number and size.*

72 **COMMENT** Clearcutting causes soil destruction and productivity losses.

RESPONSE *Most sites that are prone to landsliding or surface erosion have been identified by the Timber Production Capability Classification inventory. Others will be identified during site-specific planning. Some of these sites, "fragile nonsuitable woodland" are not planned for harvest. The remainder of these sites have been identified as fragile and require special restrictions or mitigation measures to avoid unacceptable soil impacts and productivity loss. Using management direction for the Proposed Resource Management Plan in Chapter 2 and best management practices will minimize soil destruction and productivity losses. In addition, under Proposed Resource Management Plan management regimes, areas scheduled for harvest will have an average of at least 16-25 green trees per acre in the Klamath Falls Resource Area retained after harvesting activities have been completed. No clearcutting has been scheduled for the Klamath Falls Resource Area.*

Retention of snags and green trees on the completion of harvest operations will provide future large woody debris to assist in maintaining soil productivity.

73 **COMMENT** FORCYTE-II and other ecological models should be applied to a broad range of potential management prescriptions to reduce risk of long-term site degradation. These models and models of physical properties, such as erosion, should be employed in a realistic test of timberland suitability.

RESPONSE *The suitability of forest land for timber management was determined through the timber production capability classification inventory. The Forcyte model is not calibrated for the xeric sites of southwestern Oregon and no specific ecological model exists which was designed to examine trends in site productivity under management by different silvicultural systems for such sites. We utilized the research literature and available stand models to examine the probable effects of management practices and rotation lengths on site productivity and resource sustainability. Analysis of structural and functional ecosystem diversity, floristic composition, and down wood for each alternative, and the relationships which exist between rotation lengths and site productivity were utilized in the design of the Proposed Resource Management Plan. An analysis of the probable effects of the different alternatives on site productivity and long-term timber yield sustainability is found in Chapter 4, Timber.*

74 **COMMENT** One of the potentially serious environmental effects of timber harvesting and livestock grazing is soil erosion, which can lead to a loss of soil productivity. On page 4-11 [of the draft Klamath

Falls Resource Area Resource Management Plan/Environmental Impact Statement], the document states that: "Productivity was not analyzed due to the lack of data that relates surface erosion to forest soil productivity; however indications show that topsoil removal would negatively affect productivity." When evaluating impacts of various forest and range land management practices, it may be crucial to know the long-term effects upon soil productivity, especially the effects of soil erosion.

RESPONSE *General discussion regarding the effects of land management activities on soil productivity were found in Chapter 4, pages 4-9 through 4-12, Appendix 3-B and Appendix 4-D of the draft. The statement you referred to has been changed to: "No qualitative or quantitative analysis for surface erosion was conducted due to the lack of Klamath Falls-specific data that relates surface erosion to forest soil productivity; however indications show ...". Methodologies used for assessing effects on soil productivity and to estimate of growth losses are outlined in the Proposed State Director Guidance: Planning for the Public Lands in Western Oregon (BLM 1988). These methodologies are used in the Proposed Resource Management Plan/Final Environmental Impact Statement as they apply to conditions and practices applicable to the Klamath Falls Resource Area.*

75 **COMMENT** Soil erosion mitigation practices are listed in the Management Direction Common to All Alternatives in Chapter 2 and in Appendix 2 [of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement]. Have any studies been performed to determine the effectiveness of these practices? How much erosion is caused by even-age timber harvesting and management? This same questions applies to uneven age timber harvesting and management. Have any studies been performed to determine the amounts of erosion caused by past timber harvests or livestock grazing on BLM lands within the Klamath Falls Resource Area? How has past erosion and/or soil compaction effected soil productivity?

RESPONSE *Refer to the responses to comments 74 and 120. Additional discussion has been added to the Final Environmental Impact Statement to summarize recently obtained results from two studies of soil productivity effects of forest management activities on soils similar to those in the Klamath Falls Resource Area.*

76 **COMMENT** In chapter 3, table 3-36 on page 3-103 [of the KFRA draft Resource Management Plan/ Environmental Impact Statement] indicates that a total of 14 allotments (2 on the west side and 12 on the east side) are in need of ecological improvement. On page 3-102, the east side allotments are described as being in "poor ecological condition," implying that there are moderate to serious problems with soil compaction, and/or erosion. The above information suggests that current management practices either are not sufficient to correct existing soil problems, or have not yet corrected the problems and require more time for implementation. This raises several questions. Do alternatives NA, A and B address these soil problems with suitable mitigation measures? For example, do the mitigation measures listed in chapter 2, on page 2-24, apply to alternatives NA, A and B? Are these mitigation measures sufficient to improve ecological conditions on allotments with soil problems? Would any of the alternatives result in a long-term loss in soil productivity on some allotments?

RESPONSE *Refer to the response to comment number 193. The passage referred to on page 3-102 may not be entirely clear to the reader, but it refers to just the "I" and "M" allotments within the section 15 lands on the east side of the Klamath Falls Resource Area. The remainder of the paragraph gives context to the excerpted statement. It is believed that the processes and mitigations proposed will meet the objectives of the plan for ecological condition as well as soil and grazing management. Also refer to the response to comment number 97 pertaining to the discussion of soil impacts from livestock grazing. The mitigation measures referred to are applicable to all alternatives except the No Action Alternative, as they are located in the "Management Direction Common to All Alternatives" section of Chapter 2. A monitoring plan for soils was outlined in Appendix 2-I, page 2-212 of the draft Resource Management Plan. Also, see the Proposed Resource Management Plan/Final Environmental Impact Statement monitoring plan. More specific soil monitoring guidance is found in the Rangeland Monitoring Handbook (BLM Manual Supplement H-1734-2). Results of monitoring in grazing allotments are displayed in a* *periodically issued Range Program Summary Update and are used during evaluations of Allotment Management Plans. The Proposed Resource Management Plan has adopted a series of best management practices (Appendix F) that are designed to prevent or mitigate effects on soils.*

77 **COMMENT** A more ambitious range improvement program is called for in the Gerber area, using the lop-and-scatter juniper cutting technique which has been proved very successful in reestablishing desirable forage plants. Salvaging the cut juniper for biomass, as suggested in the [KFRA] DEIS, is uneconomical, and the necessary heavy equipment would result in additional compaction to the soils, the opposite of the program's intention.

RESPONSE *Different harvest techniques for juniper removal and/or use will be analyzed on a site specific basis, for each project, through an environmental assessment. Also language has been added to Chapter 4, Soil Resources to address compaction resulting from mechanical treatment of juniper.*

78 **COMMENT** Apparently, slide-prone lands have been identified and included in the timber production capability classification fragile category. Do any of the alternatives include slide-prone lands in the harvest base? If so, what are the mitigations measures to prevent or minimize damage from landslides?

RESPONSE *As outlined in Tables 3-3 and 3-4 of the draft Resource Management Plan/Environmental Impact Statement,, the Klamath Falls Resource Area has 47 acres classified as Fragile, Nonsuitable Woodland (Slope Gradient) and 92 acres classified as Fragile Suitable, Restricted in the Timber Production Capability Classification inventory. Fragile, Nonsuitable Woodland acres are not included in the harvest base. The 92 acres classified as Fragile Suitable, Restricted were included in the harvest base except in Alternative E. Mitigation measures (best management practices) are outlined in Appendix F. Additional mitigating measures could be imposed after site-specific analysis of proposed harvest on lands in this category. To date, landslides have not been documented on BLM-administered lands in the Klamath Falls Resource Area. The 92 acres classified as Fragile Suitable, Restricted are not considered landslide prone.*

79 **COMMENT** The practice of "juniper thinning" is also discussed under the soils subsection. What is the basis for the claim on page 4-11 [of the draft KFRA Resource Management Plan/Environmental Impact Statement] that "juniper thinning" can have "overall positive effects on soils by improving soil cover conditions." What are the references used to substantiate this conclusion? Under what conditions will these "positive effects" be produced? Will irrigation or fertilization be required? Specifically, what are the short-term and long-term effects? How will wildlife and plants be effected by juniper thinning?

RESPONSE *Language has been added to Chapter 4 to address the positive and negative effects on soil and water resources resulting from juniper thinning (treatment). Some potential positive effects resulting from properly designed and implemented juniper control are: improved infiltration through increased herbaceous plant densities; increased soil moisture due to lower tree density and cover; decreased precipitation losses via tree canopy interception; and decreased overland flows and potential erosion through enhanced herbaceous ground cover (Deboodt and Test 1991). Irrigation of juniper woodlands is not planned, and it is unlikely that fertilizer would be applied to these sites unless resource concerns dictate that perennial grass cover be established in a minimum amount of time. Plants respond to increased soil moisture available after removal of junipers. Wildlife will respond favorably to the increased herbaceous plant densities and variety. Big game will be especially benefited where an understory of favorable browse species exists. This understory will become more vigorous after the removal of the overstory and result in improved quantity and quality of browse. The potential impacts to wildlife will be mitigated through unit design.*

80 **COMMENT** The discussion of the soil erosion impacts from livestock grazing should contain more information. This is one of the most serious potential impacts of livestock grazing; yet only one sentence

in Chapter 4 (on page 4-11) [of the draft KFRA Resource Management Plan/Environmental Impact Statement] specifically pertains to soil erosion.

RESPONSE *Discussion of soil impacts from livestock grazing was found in the draft KFRA Resource Management Plan/Environmental Impact Statement in Chapter 4, pages 4-10 through 4-12 and in Appendix 3-B, pages 3-5 and 3-8. Soil and watershed conditions are interconnected; therefore some of the discussion you are seeking were also found in the Water Resources section of Chapter 4 of the draft Resource Management Plan. These discussions are carried forward into the Proposed Resource Management Plan and additional discussion of the impacts of livestock grazing on soil and water resources has been incorporated into Chapter 4.*

81 **COMMENT** On page 4-11 [of the draft KFRA Resource Management Plan/Environmental Impact Statement], the document states that "... if proper soil management practices are used as planned, soil organic matter and related long-term soil productivity should be insignificantly affected in all alternatives." What references and/or research is used to support this conclusion? Is there any monitoring process that will ensure that "proper soil management processes are used as planned?"

RESPONSE *The proper soil management practices outlined in Chapter 2 and Appendix 3-A of the draft Resource Management Plan/Environmental Impact Statement are being used throughout the region. The statement you refer to has been changed to: "... if proper soil management practices are used as planned, negative impacts to soil organic matter and long-term soil productivity related to levels of organic matter in the soil would be low." Soil organic matter retention guidelines have been designed to retain organic matter levels roughly equal to those existing prior to widespread fire suppression. Fire suppression has allowed unnaturally high levels of organic matter and woody debris to accumulate, resulting in an increased risk of catastrophic fire. Retention of organic matter, when combined with soil surface protection guidelines, reduces the adverse effects of management activities to acceptable levels. Refer to Appendix F (best management practices) and Chapter 4, Soils section, for additional information.*

Water Resources

82 **COMMENT** Establish riparian management areas of sufficient width to achieve restoration on streams in poor condition. Place a high priority on restoration in these watersheds and include the State and other interest groups in restoration plans.

RESPONSE *Riparian Reserves widths of Alternative 9 of the Supplemental Environmental Impact Statement have been applied to BLM-administered lands by the Supplemental Environmental Impact Statement Record of Decision and have been incorporated into the Proposed Resource Management Plan. The Riparian Reserve widths may be modified after watershed analysis which will consider factors that include stream condition. Review and guidance for possible modifications of Riparian Reserves would be coordinated through the Regional Ecosystem Office. Restoration will be based on watershed analysis and planning. Watershed analysis will also be used to identify and prioritize potential cooperative projects involving various landowners. Additional information on restoration can be found in Supplemental Environmental Impact Statement Appendix A: FEMAT Chapter V Appendix J, and Supplemental Environmental Impact Statement Appendix B6: Aquatic Conservation Strategy.*

83 **COMMENT** The Scientific Panel has determined that "no-cut" buffers of at least 50 feet are needed to protect intermittent streams with unstable soils.

RESPONSE *The Proposed Resource Management Plan incorporates such buffers in Riparian Reserves which will include unstable and potentially unstable areas if they are not protected by timber production capability classification exclusion.*

84 **COMMENT** The relegation of first and second order streams to a lower level of protection than higher stream orders is inconsistent with the Oregon Water Quality Standards and with EPA's Regional Riparian Management Policy.

RESPONSE *The Proposed Resource Management Plan reflects the characteristic that larger stream orders generally have wider riparian zones and provide greater aquatic and terrestrial wildlife habitat than smaller stream orders.*

85 **COMMENT** Intermittent streams should be managed according to specific standards. Intermittent and ephemeral streams are treated no differently than any other forest acre in the plans, yet they are major sources of landslides and debris flows and serve as critical habitats for amphibians.

RESPONSE *Management direction for intermittent and ephemeral streams has been derived from the Supplemental Environmental Impact Statement and incorporated into the Proposed Resource Management Plan. In addition, a vast majority of the unstable lands which contain these streams of concern have been excluded from timber management as nonsuitable woodlands in the Timber Production Capability Classification.*

86 **COMMENT** Best management practices listed in the plan contain few measurable standards. BMP language should include conditions for which BMPs are applicable.

RESPONSE *The best management practices will be prescribed and implemented based upon site specific conditions and requirements. Best management practices will be monitored and evaluated and modified as necessary through an iterative process to meet water quality criteria and other resource management objectives.*

87 **COMMENT** The 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution (NPS Assessment Report) should be used in conjunction with Oregon's 1992 Water Quality Status Assessment (305(b)) Report, and other data, to establish:

1. Desired future condition on a stream-by-stream basis
2. Criteria and priorities for cumulative effects analysis
3. Priorities for water quality monitoring programs
4. Criteria and priorities for watershed level activity plans
5. Priorities for watershed rehabilitation programs
6. BMPs and watershed harvest deferrals

RESPONSE *These items will be established during plan implementation.*

88 **COMMENT** The environmental impact statement should not rely solely on the application of best management practices to satisfy the Clean Water Act. Discuss the effectiveness of best management practices.

RESPONSE *It is recognized that best management practices are the primary mechanism to enable the achievement of water quality standards. Best management practices are selected to achieve water quality standards. The iterative process that will be followed includes:*

1. *Design of best management practices based on site-specific conditions, technical, economic and institutional feasibility and the water quality standards of those waters potentially impacted.*
2. *Monitoring to ensure that practices are correctly designed and applied.*
3. *Monitoring to determine:*
    a. *The effectiveness of practices in meeting water quality standards.*

b. The appropriateness of water quality criteria in reasonably assuring protection of beneficial uses.

4. Adjustment of best management practices when it is found that water quality standards are not being protected to a desired level and/or possible adjustment of water quality standards based on considerations in 40 Code of Federal Regulations 131.

89 **COMMENT** Include a best management practice outlining specific parameters applicable to project-specific cumulative watershed effects analysis.

RESPONSE *A cumulative watershed effects best management practices has been incorporated into the Proposed Resource Management Plan and considers applicable beneficial uses, Nonpoint Source Assessment and 305(b) reported conditions, and monitoring and inventory data. When new methods of analysis are developed and validated they will be incorporated.*

90 **COMMENT** Include a best management practice with a commitment to activity deferrals when the cumulative effects analysis identifies probable beneficial use impairment. Include a best management practice outlining a more conservative site-specific project planning approach when cumulative watershed effects analysis tools are not available, are under development, or have not been validated.

RESPONSE *A best management practice has been incorporated into the Proposed Resource Management Plan to address activity deferral or mitigation of cumulative watershed effects where impacts to beneficial uses are probable.*

91 **COMMENT** The BLM should not allow discretionary mining, grazing, and other discretionary activities which would increase temperatures over the long term in streams not meeting state standards for temperature.

RESPONSE *Authorized management actions will be designed or regulated to comply with applicable water quality criteria for the protection of identified beneficial uses and the Supplemental Environmental Impact Statement Aquatic Conservation Strategy.*

92 **COMMENT** Acknowledge the limits on the availability of surface water and address surface water quality problems.

RESPONSE *Current Departmental policy requires that we follow State requirements for the acquisition of all necessary water rights. Where surface water is limited in availability, we will pursue acquisition of water rights based upon the most current Departmental policy. Surface water quality problems as identified in the Oregon Nonpoint Assessment Report and the 1992 Water Quality Assessment (305 (b)) Report and/or district inventories are described in Chapter 3 of the Proposed Resource Management Plan/Final Environmental Impact Statement.*

93 **COMMENT** Describe watershed improvement and stream restoration activities which increase low season flow.

RESPONSE *Implementation of riparian enhancement projects which enhance the potential for bank storage and slow release through establishment of proper function riparian systems, and mitigation of existing compaction through obliteration of roads or other compacted land surfaces to restore slope hydrologic functions, will improve flood plain and upland hydrologic functions to enhance low season flow.*

94 **COMMENT** Set watershed impact standards, including maximum soil compaction, erosion rates, equivalent clearcut acres and relative percentage of seral stages.

RESPONSE *Across the board watershed prescriptions are inappropriate. Prescriptions for individual watersheds will be based upon water analysis, application of best management practices and assessment of cumulative watershed effects, considering watershed specific soils, geology, inherent channel stability, beneficial uses to be protected, and other relevant site-specific characteristics.*

95 **COMMENT** Watersheds should be classified and prioritized according to current functional or ecological conditions and importance for maintaining viable wildlife populations.

RESPONSE *Although the BLM's forest inventory data provides some information on overall ecological or functional condition, this information cannot be disaggregated by watershed and remain statistically valid. Data on intermingled private lands is even less useful. We are currently implementing a riparian inventory to assess functional condition of stream reaches and riparian zones. River basin analysis will prioritize watersheds to establish a sequence for analysis as part of the watershed analysis program.*

96 **COMMENT** Watershed-specific standards should be developed in cooperation with adjacent lands.

RESPONSE *Cooperation with other parties may often be an appropriate way to implement Resource Management Plan decisions most effectively, and their involvement will be encouraged. It is not appropriate, however, to make Resource Management Plan implementation dependent on the cooperation of other landowners.*

97 **COMMENT** Watershed concerns suggest that road culverts design standards should be based on 50-year peak flow, not 25-year.

RESPONSE *Road culvert standards have been revised to require that culverts be designed to accommodate at least the 100-year flood. This conforms the Proposed Resource Management Plan to the standards and guidelines attached to the Supplemental Environmental Impact Statement Record of Decision.*

98 **COMMENT** The goal for watershed management in watersheds providing surface water to public systems serving municipalities should be restated, as being to assure the needs of the users are addressed and to protect comprehensive water quality.

RESPONSE *Watersheds providing surface water for domestic uses will be managed to meet applicable water quality requirements established through Oregon Department of Environmental Quality.*

99 **COMMENT** Display severely impaired streams identified by DEQ's 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution within analytical watersheds.

RESPONSE *Table 3-8 in the Proposed Resource Management Plan/Final Environmental Impact Statement has been reformatted to show impaired stream segments by analytical watershed.*

100 **COMMENT** The Department of Environmental Quality's 1988 non-point source report identified many stream segments in the district that have serious non-point source pollution problems caused by forest practices. The DEIS should have updated that report with more recent information. What is BLM doing about the problems?

RESPONSE *The 1988 319 Assessment Report was a collaborative effort undertaken by many agencies and groups within the state. BLM district personnel played an integral role in providing the information contained in the report. We, in cooperation with Oregon Department of Environmental Quality, are currently in the process of systematically updating the Assessment Report. As a Designated Manage-*

ment Agency under the Clean Water Act we have worked and will continue to work closely with Oregon Department of Environmental Quality in improving and updating the assessment of stream segments on BLM-administered lands. Opportunities to mitigate existing Nonpoint Source pollution sources will be an integral component of plan implementation.

101 **COMMENT** Contact Oregon Department of Environmental Quality for their results of recent monitoring programs on streams.

RESPONSE *As a Designated Management Agency we work closely with Oregon Department of Environmental Quality on all aspects of the Nonpoint Source Pollution Management Plan, including the sharing of data relevant to BLM administered lands.*

102 **COMMENT** On-the-ground mapping of streams and stream orders, with clear identification of addressed intermittent and perennial streams is needed. The maps should also present 100-year flood plains and potentially hyporheic zones.

RESPONSE *Such mapping would be a massive undertaking and would have to cover not only BLM-administered lands, but also some of the intermingled lands in other ownerships. We currently have plans for revising and upgrading the current hydrography data themes for our Geographic Information System to be completed concurrent with implementation of the plan. Currently, we do not have plans for mapping of perennial and intermittent stream 100-year flood plains or potential hyporheic zones.*

103 **COMMENT** Ten years is not an appropriate time frame for assessing effects to water quality. At a minimum short-term time frames should be analyzed under the shortest practicable period of time related to the implementation of specific activities.

RESPONSE *The Resource Management Plan does not fix dates for the implementation of specific activities that might affect water quality. Most site-specific activities contemplated will occur two or more decades in the future, not during the life of the plan. Most that will occur during the life of the plan are not site-specifically established but their approximate location is projected through the ten-year timber management scenario. Shorter time frames can only be assessed as annual or sequential multi-year plans for site-specific treatments are developed.*

104 **COMMENT** Roads cause most of the sedimentation in our rivers through surface erosion and landslides.

RESPONSE *The BLM will continue nonpoint source pollution management in accordance with the guidelines established by the Environmental Protection Agency and the Oregon Department of Environmental Quality. Appendix F contains a section on best management practices that will be used to help ensure compliance with these guidelines. Some of these practices include revegetating exposed soils, restricting access to natural surface roads, and paving or rocking permanent roads. Temporary roads will be put to bed or erosion control practices will be used to keep erosion to an insignificant level. In addition, management activities and new road construction will be designed, located, and constructed to avoid mass soil movement. As stated in the Supplemental Environmental Impact Statement Record of Decision Aquatic Conservation Strategy, watershed restoration will include control and prevention of road-related runoff and sediment production. The Timber Production Capability Classification inventory has located areas with surface erosion and landslide limitations. This inventory data will be supplemented by an on-site investigation for each proposed management activity. In Key Watersheds identified in the Supplemental Environmental Impact Statement, there will be no net increase in roads.*

105 **COMMENT** The plans for road building violate the Clean Water Act because new roads will contribute sediment to already impacted streams.

RESPONSE *Best management practices will be implemented to minimize potential impacts from both new and existing roads. In addition, opportunities will be identified through project planning to mitigate existing nonpoint sources of sediment.*

106 **COMMENT** It is unclear how the Watershed Condition Index (WCI) was generated; how it was used in planning; how it will be used in standards, guidelines and monitoring; and how it will be validated.

RESPONSE *The watershed condition index has been dropped as an analytical tool, for the following reasons: First, the information upon which the draft Resource Management Plan/Environmental Impact Statement watershed condition index analysis was calculated is out of date due to significant logging activities on private and industrial lands. Second, it will be difficult to update and forecast land disturbing activities on BLM-administered lands, due to soft projections of potential sale quantities in the ten-year timber management scenario for the Proposed Resource Management Plan. Finally, it was felt that requirements for watershed analysis in the Supplemental Environmental Impact Statement Record of Decision would ultimately provide a more revealing assessment of the current watershed condition and provide the foundation for appropriate resource management decisions.*

107 **COMMENT** Explore the possibility that mining activities on BLM lands cause significant increases in the concentrations of metals in streams that supply public water systems.

RESPONSE *Mining activities on BLM-administered lands must comply with surface management regulations, state water quality criteria and best management practices, to protect beneficial uses such as public water supplies.*

108 **COMMENT** The people that BLM would be dosing by allowing pesticides, inerts, fertilizers and the like to get into drinking water supplies would be at risk.

RESPONSE *The buffering of streams when such products are used is part of the commitment to provide treatable water at the point of intake. Impacts of the use of herbicides and inert carriers have been fully addressed in BLM's Western Oregon - Management of Competing Vegetation Environmental Impact Statement and Northwest Area Noxious Weed Control Environmental Impact Statement.*

109 **COMMENT** Expand the discussion concerning the availability of groundwater and groundwater quality.

RESPONSE *Available information, mostly from other agencies, has been incorporated into the Proposed Resource Management Plan/Final Environmental Impact Statement. The extent of ground water supply effects is a site-specific issue and will be evaluated at the watershed or project level. Management prescriptions will be developed in all instances where groundwater quality might be potentially impacted.*

110 **COMMENT** The need for acquiring private landowners water rights and establishing instream rights should be stressed.

RESPONSE *Both of these proposals are beyond the scope of the Resource Management Plan/Environmental Impact Statement as they are beyond BLM's authority.*

111 **COMMENT** Has a complete inventory been conducted to assess the district's wetland resources? How are significant impacts assessed? How will wetland inventories be conducted prior to timber harvests and other activities?

RESPONSE *We do not have inventories of all wetlands. Wetland inventories will be part of site-specific interdisciplinary inventories conducted prior to activities. Activity plans and project plans will identify* *appropriate protection for these lands consistent with our goal for the protection of water quality and existing federal direction for their classification and preservation. See Riparian Reserve objectives in Chapter 2. Environmental analysis of these plans will lead to determination if impacts would be significant.*

112 **COMMENT** Specifically name wetlands as features for which riparian management areas will be established and specifically identify wetlands that will be restored or enhanced.

RESPONSE *The Proposed Resource Management Plan/Final Environmental Impact Statement acknowledges wetlands and provides management direction for their protection. Opportunities to restore or enhance wetlands will be identified during implementation of the plan. Identification in the Proposed Resource Management Plan of all wetlands to be restored or enhanced is beyond our current capability, lacking a complete inventory of these resources. Chapter 3, Riparian-Wetland Resources section, contains a table that lists several riparian-wetland areas identified for potential restoration activities.*

113 **COMMENT** Acknowledge the need to coordinate and cooperate with public and private landowners to inventory wetlands, set criteria for significance for protection and restoration, and coordinate priorities to protect and restore public wetlands.

RESPONSE *Coordination and cooperation with other landowners may be an appropriate way to implement Resource Management Plan decisions most effectively. It is not appropriate, however, to make Resource Management Plan implementation dependent on the cooperation of other landowners.*

114 **COMMENT** Provide a more thorough discussion of the potential effects on water yields and streamflow.

RESPONSE *Appendix P and Chapter 4 contain discussions on this topic to reflect the circumstance that potential effects on water yield and streamflow are highly dependent upon physio-climatic watershed conditions and the nature of management action. Reduction of evapotranspiration immediately following regeneration timber harvest will generally make more water available for streamflow, though the duration and timing of increased yield will be highly variable. Analysis of water yield and timing will be a component of watershed analysis.*

115 **COMMENT** Damaged watersheds [in the KFRA] should be withdrawn from entry to allow healing and rehabilitation, but unlike the Medford District, these withdrawn areas should not be included in the timber base and used to inflate the ASQ.

RESPONSE *No watersheds were determined as needing to be withdrawn from entry by the interdisciplinary planning team for the draft plan, because the draft plan's Preferred Alternative allowable sale quantity on lands west of Highway 97 would have been reduced by 76 percent over the current levels in the Management Framework Plan. The draft plan's Preferred Alternative allowable sale quantity on lands east of Highway 97 would be 1.4 million board feet, an 8 percent reduction from current levels. The 76 percent reduction would substantially reduce the potential of watershed impacts, while allowing for a sustained yield of forest products. The allowable sale quantity for lands east of Highway 97 was relatively small, and allows treatment of stands to maintain forest health. Watershed analysis will assess the ecological health of the watershed in the resource area and provide information upon which future management decisions can be based. How much, or if, timber harvest will be assessed during the appropriate watershed level planning and National Environmental Policy Act decision process.*

116 **COMMENT** The [KFRA] draft Resource Management Plan/Environmental Impact Statement discusses potential cumulative water quality impacts. However, EPA is concerned that the draft Resource Management Plan/Environmental Impact Statement does not specifically describe the nature of future CWE analysis to be conducted for site-specific projects during Resource Management Plan implementation.

Until the WCI is validated and peer reviewed, it cannot be used with confidence for site-specific projects. To be meaningful, CWE analyses also need to be considered and watershed protection measures implemented by all major land owners in a watershed.

RESPONSE *Refer to the response to comment number 134. The watershed condition index has not been carried forward into the Proposed Resource Management Plan/Final Environmental Impact Statement. Watershed analysis will provide the information from which future cumulative watershed effects will be based.*

117 **COMMENT** In July 1991 Oregon adopted narrative biocriteria as part of its water quality standards. The state is in the process of developing the implementation guidance for the biocriteria and is selecting appropriate reference sites in various ecoregions in the state. Once this framework is in place, the BLM should coordinate its monitoring locations and protocols to allow comparison with the reference site conditions. This is necessary in order to determine whether the water quality standards for protection of biological integrity of the waters are being met.

RESPONSE *As a Designated Management Agency under the Clean Water Act, the BLM has and will continue to work closely with the Oregon Department of Environmental Quality. Results of macroinvertebrate sampling of BLM-administered streams has been shared with representatives of Department of Environmental Quality, and these representatives have visited the Klamath Falls Resource Area and provided guidance on our water quality sampling program.*

118 **COMMENT** The [KFRA] draft plan fails to disclose the “best management practices” which will be used for their watershed management activities.

RESPONSE *The best management practices were outlined in Appendix 2-A in the Draft Resource Management Plan/Environmental Impact Statement. The Proposed Resource Management Plan has adopted best management practices from the Supplemental Environmental Impact Statement Record of Decision and included them with those of the draft Resource Management Plan Appendix 2-A. Refer to Appendix F of the Proposed Resource Management Plan.*

119 **COMMENT** Water quality may not meet DEQ water quality. At the Klamath River Compact meeting this fall in Redding the California Water Department reported water quality was good in this area. There is no fertilizer or pesticides used on this allotment. At times when water doesn't flow, but sets in pools or reservoirs, the dissolved oxygen and temperature may become unsatisfactory for fish but this is not because of grazing.

RESPONSE *Research has shown that unmanaged use of stream and riparian areas by livestock results in overgrazing of available forage, a decrease in shade-producing vegetation, exposure of stream surfaces to solar radiation, and increased water temperatures. In addition, bank trampling and sloughing makes stream channel cross sections wider and shallower. Historic season-long livestock grazing and an upstream water impoundment were the major impactors to this stream, and have resulted in impaired stream and riparian function.*

120 **COMMENT** In general, is there any data available on soil compaction, soil erosion, vegetation loss, and its related effects on water quality (stream sedimentation, increase in water temperature) as a result of past timber harvest activities? Is there any data available specifically for the Klamath Falls Resource Area? If available, has any of this information been used in current projections of the effects of timber harvest activities in the various alternatives?

RESPONSE *Refer to the response to comment number 74. Additional information can be found in Chapter 4, Water Resources Section. Data specific to the Klamath Falls Resource Area is available in* *individual timber sale and grazing allotment files. These data include the results of compaction surveys, cumulative watershed effects analyses, and water quality monitoring. Some water quality and watershed condition information was outlined in Chapter 3, Water Resources; Chapter 4, Water Resources; and Appendix 3-A, pages 3-19 through 3-20 of the draft KFRA Resource Management Plan/Environmental Impact Statement. All this information was used in the draft and proposed plans in estimating the effects of timber harvest activities in the various alternatives. Additional site-specific information will be addressed during watershed analysis.*

121 **COMMENT** The [KFRA] Resource Management Plan/Environmental Impact Statement describes the water quality of the upper Klamath River as poor due to high temperature; low dissolved oxygen; high turbidity; high pH; and high levels of algae, bacteria, and suspended sediment. Given the BLM's interest in enhancing water quality throughout the Klamath Falls Resource Area and the Klamath River Canyon, the BLM should encourage actions like the Salt Caves Project that improve water quality. However, in analyzing the Resource Management Plan/EIS's alternatives, including the Preferred Alternative, the BLM fails to incorporate the latest available information and properly account for water quality benefits associated with the Salt Caves Project. The Resource Management Plan and the supporting Environmental Impact Statement are incomplete and misleading without the inclusion of this information.

RESPONSE *Information about the potential effects of the no-dam alternative on water quality and quantity and riparian-wetland areas has been incorporated into the Final Environmental Impact Statement.*

122 **COMMENT** Middle Spencer Creek/South Hayden Creek/Upper Klamath Basin: Timber harvest and road construction in these watersheds may be implemented without exceeding the water quality standards (WQS) or causing beneficial use impairment. However, the primary methods for preventing standards impairment are not developed sufficiently in the draft [KFRA] Resource Management Plan/Environmental Impact Statement.

The basis for our environmental objections is that timber harvest, road construction, and grazing may occur without an adequate cumulative watershed effects analysis of site-specific projects and that timber harvest deferrals may not occur in already degraded watersheds in response to these analyses. The Environmental Protection Agency is also concerned that water quality monitoring plans are not sufficiently developed to verify that best management practices are effectively preventing adverse water quality impacts.

A cumulative watershed effects analysis process should be developed for inclusion in the final Resource Management Plan/Environmental Impact Statement. Since implementation of best management practices represents the major form of mitigation the final Resource Management Plan/Environmental Impact Statement needs to discuss how effective the best management practices have been in the past. Judicial reviews of the National Environmental Policy Act cases have supported not only the need for identifying mitigation measures, but for discussing mitigation measure effectiveness as well.

RESPONSE *In Appendix 3-B, pages 3-14 and 3-15 of the draft Resource Management Plan/Environmental Impact Statement, a cumulative watershed effects analysis procedure was outlined. Watershed analysis will provide data for CWE analysis of site-specific projects. As discussed in Appendix 2-A of the draft, one or more measures could be used to mitigate water quality impacts in watersheds sensitive to management actions because of cumulative effects or other water quality concerns. Deferment is one of the options listed. Monitoring of the Resource Management Plan was discussed on pages 2-72 and 2-73, and in Appendix 2-I of the draft.*

The best management practices were outlined in Appendix 2-A in the Draft Resource Management Plan/Environmental Impact Statement. The Proposed Resource Management Plan has adopted best management practices from the Supplemental Environmental Impact Statement Record of Decision and included them with those of the draft Resource Management Plan Appendix 2-A. Refer to Appendix F of the Proposed Resource Management Plan. Watershed analysis will provide the basis for cumulative water-

shed effects analysis of management activities in watersheds. A cumulative watersheds effects analysis method has not been incorporated into the Proposed Resource Management Plan because as new methodologies become available and new information obtained for conditions unique to this area, the cumulative watershed effects analysis process will be updated and revised.

123 **COMMENT** Additional uses of the Nonpoint Source Assessment Report should be developed for the final Resource Management Plan/Environmental Impact Statement to establish 1) Desired future condition on a stream-by-stream basis from which Resource Management Plan accomplishments can be measured; 2) Criteria and priorities for cumulative effects analyses; 3) Priorities for water quality monitoring programs; 4) Criteria and priorities for watershed activity level plans; 5) Priorities for watershed rehabilitation programs; 6) Best management practices and thresholds and decision criteria for watershed harvest deferrals.

RESPONSE *The uses of Nonpoint Source Assessment Report and the 3059b) report you list are most appropriately incorporated and would be included through watershed analysis and planning at the landscape (e.g. watershed or allotment) level. At this level, site-specific data collection, inventory, analysis of cumulative effects, and design of rehabilitation projects would occur. Furthermore, at this level, the definition of all proposed management activities (grazing, prescribed fire, recreation, forestry) over the life of the plan would be detailed enough to analyze and obtain more meaningful results. Refer to the response to comment number 122 for more details.*

124 **COMMENT** Despite BLM's continuing efforts to restore stream function in the Gerber Riparian Demonstration Area, many grazing allotment reports in this area still note unsatisfactory wetlands, riparian areas in less than good condition, and moderate to severe water quality problems. In light of increasing public concern over grazing on public lands, it is imperative that we support and strengthen this "showcase" demonstration project. If successful, this project could demonstrate the alleged beneficial use of controlled grazing as a means of improving soil and rangeland condition by mimicking natural processes. At least, it should be able to demonstrate that careful grazing regimes need not prevent a slow recovery.

RESPONSE *Appendix 2-H in the draft Resource Management Plan/Environmental Impact Statement does list as "Identified Resources Conflicts/Concerns" many, yet to be completely resolved, problems such as you point out. This does not take away from the fact that much as been accomplished in the Gerber area regarding riparian and upland conditions. It does point out that the management and conditions desired have not been fully achieved as of yet. We believe that the Proposed Resource Management Plan, as the guiding "umbrella" plan for the Klamath Falls Resource Area, will set the stage for allotment monitoring evaluations, activity plans, and additional on-the-ground management actions that will correct the remaining resource problems. See Appendix L.*

125 **COMMENT** Page S-3, Table S-2, Water Quality [of the KFRA draft Resource Management Plan/Environmental Impact Statement]. It is difficult to understand how all of the alternatives would have the same impacts on the water quality of the area's "analytical watersheds" considering that 1) timber harvest on the West side varies by up to 1,800 percent, depending upon the alternatives being compared and 2) the differences in Riparian Management Areas between the alternatives (Table S-1, S-13). The final document should clearly explain why the impacts are identical for all alternatives considering their magnitude of difference in timber harvest and riparian protection.

RESPONSE *The table should have read as follows:*

*Water Quality (10 Years)**	*NA*	*A*	*B*	*C*	*D*	*E*	*PA*
Number of analytical watersheds probably improving	*1*	*2*	*2*	*4*	*3*	*4*	*4*
Number of analytical watersheds probably declining	*3*	*2*	*2*	*0*	*1*	*0*	*0*

**Based on the watershed condition index calculations of the ten-year timber scenarios and other impact analysis in Chapter 4.*

The use of the watershed condition index has been dropped from the Proposed Resource Management Plan. Refer to the response to comment number 106 for more details.

126 **COMMENT** Page S-13, Table S-1 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. We believe the 40-foot buffer identified for 6th order streams under the PA is a typographical error and should read 240 feet. The text provided for "water quality protection" under the PA in Table S-1 should be expanded to include the language concerning ecological condition contained in the text for Alternative E.

RESPONSE *The buffer width for streams sixth order and larger in the draft Resource Management Plan Preferred Alternative is 240 feet. Language concerning the Proposed Resource Management Plan in Chapter 2 has been modified to include discussion of "proper functioning condition", which is an equivalent objective to the one you cite for Alternative E.*

127 **COMMENT** Model aggressive juniper thinning program to increase water/spring flow.

RESPONSE *Harvest within juniper woodlands would be designed to benefit many resource related objectives, not the least among them, potential increases in water yield from springs. On page 4-13, the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement states that due to the "variability in sites and lack of knowledge about the interaction between surface and ground water", the potential for increasing annual water yields from juniper woodlands and affected stream areas is uncertain. No model currently exists to relate water yield increases to juniper thinning. Model development is most appropriately conducted through research.*

128 **COMMENT** John Buckhouse of Oregon State University's Department of Rangeland Resources challenges the simple and often heard notion that controlling juniper makes more moisture available. Without enough herbaceous ground cover, erosion of soil may actually increase (according to Buckhouse). When juniper is cut leaving the debris in place enhances structure, maintains wildlife diversity, helps seeding of herbaceous ground cover, and controls erosion while helping to pool water to increase infiltration rates. Any juniper control project needs to address how the project will allow for increased overland water flow.

RESPONSE *The specific design details of each proposed juniper treatment project would be determined on a case-by-case and site specific basis. The option of leaving juniper material or residue on site has been used in the past and will continue to be used, where appropriate, in the future. In areas where there is inadequate seed source for reestablishment of herbaceous (especially perennial) ground cover, then seeding of the area prior to juniper treatment and leaving debris in place would be planned. Seeding with native species would be preferred. Refer to the response to comment number 127 for additional information.*

129 **COMMENT** On page 4-13 [of the draft KFRA Resource Management Plan/Environmental Impact Statement], under the subsection on Water Quantity, the document states that: "Due to the extent of previous timber harvest activities, it is likely that flow increases, if any, have already been realized in forests in the planning area. Because of this and the type of harvest that would occur (partial cuts in previously entered stands) in most of the planning area, there would likely be little or no potential for increasing annual water yield in these areas." If I understand this statement correctly, it states that continuing timber harvest will not increase surface run off. Is this conclusion true for all alternatives? Has any research or studies been performed to verify this conclusion? What reference source is this conclusion based upon? Have past increases in flow created adverse environmental effects, such as downstream flooding, stream channel scour, etc.?

RESPONSE *As cited, the draft Resource Management Plan/Environmental Impact Statement did acknowledge that the potential to increase surface runoff exists, although it is expected to be low. Most of the commercial forest land in the planning area has been harvested previously. Compaction, as a result of this past harvesting, has also already occurred. All alternatives (except the Alternative No Action) would have tractor yarding on designated existing skid trails. Existing skid trails not to become part of the permanent forest management system would be tilled and planted. No large increases in overall compaction levels in the planning area are anticipated. Compaction could affect surface runoff, timing, and amounts. Partial cut harvests would not significantly reduce the canopy cover throughout a treatment area, which can also affect surface runoff. Because of the checkerboard ownership existing in watersheds with BLM-managed forestlands, the effects specific to BLM management activities are masked. The effects of increases in flow have been studied in the region, are well documented, and are discussed in Appendix P.*

130 **COMMENT** The need for obtaining water rights should be stressed along with a specific plan for stream restoration. In general water resources goals and objectives need to be clearly described. Additionally, the best management practices should be more specific, with specific standards to see to it that water resources objectives are met.

RESPONSE *Instream water rights are held in trust by the Water Resources Department. They may be initiated upon application from the Department of Fish and Wildlife, the Department of Environmental Quality, or the Parks and Recreation Department. They may also be established by the conversion of minimum streamflows or the transfer of an existing appropriation to an instream water right. Where opportunities are available, the Klamath Falls Resource Area would consider applying for a conversion of its existing appropriation to an instream water right, taking into account the various resource values involved and management needs. Chapter 2 has been revised to clarify goals and objectives, and to more clearly and thoroughly discuss best management practices. Stream restoration plans would be outlined in site-specific plans, such as allotment management plans.*

131 **COMMENT** The watershed condition index does not provide an adequate assessment of synergistic and/or cumulative effects for site-specific projects. It appears to be quite subjective and may produce variable results. The final Resource Management Plan/Environmental Impact Statement should provide greater explanation regarding watershed condition index assumptions as well as selection of index constants. In addition, several index factors may distort actual resource impacts. The major missing component is a way of characterizing uncertainty in the estimates. This requires a methodology for making and evaluating field measurements and assessing uncertainty.

RESPONSE *The watershed condition index has not been incorporated into the Proposed Resource Management Plan. Watershed analysis is expected to replace the watershed condition index for assessing current conditions within a watershed. Refer to the response to comment number 106 for more information.*

132 **COMMENT** The [KFRA] draft Resource Management Plan/Environmental Impact Statement provides inadequate protection for riparian management areas in first and second order (headwater intermittent and perennial) streams, water quality standards may not be met and beneficial uses may not be protected. Riparian management area widths are too narrow and could be weakened through road and yarding corridor development and grazing. Under the [draft] Preferred Alternative, timber harvest could occur in riparian zones for road construction, yarding, or habitat improvement; however, the draft Resource Management Plan/Environmental Impact Statement does not outline under what conditions these activities could take place. In addition, the final Resource Management Plan/Environmental Impact Statement should clarify how the average widths shown for riparian management areas will be utilized in on-the-ground analysis. Specifically, the final Resource Management Plan/Environmental Impact Statement should identify how site-specific riparian resource management would be documented and consistently implemented.

RESPONSE *Refer to the response to comment number 82. Chapter 2 has been revised to clarify goals and objectives, and to more clearly and thoroughly discuss best management practices.*

Biological Diversity

133 **COMMENT** Emphasis remains on single species recovery programs rather than on habitat protection and other measures that focus on maintaining biodiversity.

RESPONSE *The emphasis of the Proposed Resource Management Plan is dual, focusing on both. Emphasis on existing recovery programs must continue until a decision is made on the recovery status of species such as the peregrine falcon, Columbian white-tailed deer, and bald eagle. The US Fish and Wildlife Service currently focuses on single species recovery and until an official shift to habitat recovery is made, BLM land management must satisfy single species management requirements.*

134 **COMMENT** Old Growth Emphasis Areas do not protect old growth ecosystems from logging roads, soil compaction and other threats to biodiversity.

RESPONSE *The Proposed Resource Management Plan substitutes Late-Successional Reserves. Thinning or silvicultural treatments within them must be beneficial to the creation of late-successional forest conditions.*

135 **COMMENT** Identify and examine expected future condition for biodiversity. Relate to the compositional, structural and functional attribute of ecosystems and include a regional perspective.

RESPONSE *Data to do this is not available.*

136 **COMMENT** Provide information on the current condition of ecosystems and their compositional, structural and functional attributes.

RESPONSE *Information gleaned from existing inventories was used to develop the information displayed in the Biological Diversity section of Chapter 3 in the draft Resource Management Plan. In the Proposed Resource Management Plan/Final Environmental Impact Statement we used data from a Forest Service synthesis of available information about the pre-settlement characteristics of Pacific Northwest forests to compare current forest condition and function with the range of pre-settlement conditions. Ecosystem functions are statements about the ways in which ecosystem processes operate.*

These can sometimes be the subject of inventories; for instance, inventories describing the nesting success of spotted owls provide an indicator of one aspect of ecosystem function. Where possible, such statements of ecological function are shown in Chapter 3, Biological Diversity and Ecological Health, or other sections describing specific resources.

More generally, ecosystem processes are implied from the presence of species, structures, and disturbance intervals known to be required for functions to occur. For instance, the retention of nitrogen fixing plants in young stands, the nitrogen fixation associated with lichens in large old trees, and microbial fixation of nitrogen in down wood result in processes which maintain site productivity. If forest conditions are maintained within the range of natural variation which occurred before settlement began, and if species mixtures and structural complexity are retained, it is thought that ecological functions will be maintained.

137 **COMMENT** Express the amount of large woody debris to be retained by size class, that is, logs at least 20 feet long and 25 inches in diameter at the large end.

RESPONSE *We have adopted the Supplemental Environmental Impact Statement Record of Decision standards. On the west side, 120 linear feet of logs per acre, equal to or greater than 16 inches in diameter and 16 feet long would be retained. On the east side, where reoccurring fires under natural conditions kept the coarse woody debris component at lower levels, 50 linear feet of logs per acre equal to or greater than 12 inches in diameter and 8 feet long would be retained.*

138 **COMMENT** Permit the retention of large woody debris from the merchantable component if the unmerchantable component is absent.

RESPONSE *Both merchantable and non-merchantable down wood will be candidates for retention in meeting structural targets within the analytic landscape, however non-merchantable wood will be utilized first in satisfying targets.*

139 **COMMENT** Within 100 years of management under the draft plans, almost all large woody material will disappear in general forest management areas.

RESPONSE *Because there are differences in the decay rate for down wood in different environments and because the contribution of down wood is usually periodic, related to root diseases, storm events and other disturbances, there will be variation in the amount and size of down wood which will exist in the forest for different structural (age) classes. For the Proposed Resource Management Plan, structural targets have been set as described in Chapter 2. Retention of some green trees, snags and available large woody debris in harvest areas will maintain the large woody material component in the Matrix (general forest management area).*

140 **COMMENT** Include retention of target levels of dead-and-downed wood in timber sale contract stipulations.

RESPONSE *Retention levels set forth in the plan objectives will be translated into contract stipulations.*

141 **COMMENT** It is not possible to determine the proportion of mature stands that will be logged in the first decade.

RESPONSE *As modeled in the TRIM-PLUS model for the Proposed Resource Management Plan, four percent of mature stands are expected to have regeneration harvest in the first decade.*

142 **COMMENT** The substitution of geographically diverse plantation stock for narrow, locally adapted families may increase diversity at the site level, but homogenizes the landscape and thus reduces overall diversity. Address the influence of BLM's tree improvement program at the species, ecosystem and landscape levels.

RESPONSE *We expect to reexamine our tree improvement program and the extent to which we use genetically improved stock, to assure that the genetic diversity of the forest is maintained at both the stand level and at the regional level. The tree improvement program appears to increase our ability to fit naturally evolved and adapted genotypes to forest sites, to maintain the genetic quality of forest stands and to be useful in increasing resistance of stands to global climate change.*

Management of the forest with or without tree improvement has the potential to change genetic diversity. Tree improvement assures genetic conservation of desired genotypes for use in meeting resource management objectives.

143 **COMMENT** Page 2-11, Brush and Hardwood Conversion [draft KFRA Resource Management Plan/ Environmental Impact Statement]. The final document should clearly describe the impacts of conversion to fish and wildlife and explain how it would affect biodiversity and ecosystem maintenance.

RESPONSE *No brush or hardwood conversion is planned under the Proposed Resource Management Plan. On pages 4-36, 4-41, and 4-78, the draft Resource Management Plan/Environmental Impact Statement described the impacts of brushfield conversion on fisheries, wildlife, and biodiversity. Alternatives C, D, and E have lesser impacts than Alternatives A, B, and No Action. Impacts to fish would be minimal since brushfield conversion sites are located away from streams. Forage and hiding cover would be reduced on brush conversion areas. However, the relatively short harvest rotations of intermixed private lands are expected to provide a good representation of early seral stage vegetation across the landscape.*

As stated in the cited paragraph, brushfield conversion to conifer stands would only occur on sites classified as conifer sites, and that support a shrub community only as a result past human management. Therefore, not all brushfields would be treated and some would be retained. The effect is considered unavoidable since it would occur as a result of achieving the objective of that particular alternative.

Similarly, reduction of juniper on range lands would occur in areas where juniper has expanded it distribution as a result of past human management, such as direct fire suppression and indirect fire suppression through the elimination of fine fuels from heavy utilization by livestock. Areas that support "old growth" juniper without human intervention would not be treated. Again, not all juniper would be treated and some would be retained.

144 **COMMENT** The final Preferred Alternative or selected alternative should include management guidelines to provide buffers that will restore and protect the microclimates and energy flows described. On page 4-32 [of the draft KFRA Resource Management Plan/Environmental Impact Statement] the necessary buffer width required is stated to be approximately 400 feet.

RESPONSE *Little data is available and more research is needed on the size of buffers needed to protect special habitats and riparian-wetland areas from all indirect effects of management actions. The buffers selected for the draft Preferred Alternative were chosen to provide a balance between economic use of resources and protection of special habitats from all direct effects and many of the indirect effects mentioned. The assumption on page 4-32 that a buffer width of 400 feet would maintain stable microclimates in forested riparian areas is based on research which indicates that interior old-growth conditions are only maintained at 400 feet inside an old-growth stand adjacent to a clear cut, or total vegetation removal. Clear cuts are not proposed for forest lands in the Klamath Falls Resource Area, and much of our land base is not forested, therefore the assumption that a buffer width of 400 feet in necessary for maintenance of a stable microclimate in all situations is not warranted. However, standards adopted from* *the Supplemental Environmental Impact Statement Record of Decision for the Proposed Resource Management Plan require Riparian Reserves that include a larger number of acres across the landscape than the riparian buffers in the draft Resource Management Plan's Preferred Alternative.*

145 **COMMENT** p.3-24; 2nd column, last paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The statement that "Early seral communities usually have the largest number of higher (vertebrate) animal species..." needs reference and further discussion, as this many well vary across taxonomic groups and from area to area. Furthermore, as defined in the body of the text, early seral stages may in fact consist of pooling/lumping of dissimilar communities and dynamic processes in different habitat types. Some expansion upon this point would be appropriate.

RESPONSE *The discussions on biological diversity have been revised and expanded.*

146 **COMMENT** p. 3-26, 2nd column, 2nd full paragraph [of the draft KFRA Resource Management Plan/ Environmental Impact Statement]. While I did not make a comprehensive perusal of the entire text for the mention of connectedness, it seems that there is relatively little discussion of this concept in the body of the text as well as little consideration in Figures concerning biodiversity and related concerns. As with my previous statement concerning genetic diversity, there exists a significant amount of discussion and information (at this point mostly theoretical) concerning the importance of connectedness. A general discussion of this point under one subtopic heading would be welcome, as well as evaluation of connectedness of habitat patches for various species under the management alternatives. I realize that the development of the model for the spotted owl is probably at one end of the spectrum of possibilities in this regard, but the lack of a species-specific model(s) should not preclude a general discussion.

RESPONSE *The concept of connectedness is discussed in the Landscape Diversity subsection in terms of the extent of fragmentation of particular habitat types (see pp. 3-26, last paragraph, to 3-27, first paragraph; pg. 3-27, last paragraph; pg. 3-28, first paragraph; and Table 3-11 on pg. 3-27 of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement). Although it is true that there is a considerable amount of (mostly theoretical) discussion and information concerning the connectedness concept, it is not appropriate for an Environmental Impact Statement to repeat at length general information previously published.*

147 **COMMENT** P.2-95, footnote 11 [of the draft KFRA Resource Management Plan/Environmental Impact Statement: It is noted that "Each alternative includes 54,900 acres of juniper woodland as available for enhancement for other uses", which by perusal of the text usually involves vegetation management to encourage biomass production for other considerations, most notably livestock grazing. Given statements in the body of the text about managing for biodiversity and maintenance of native plant communities, how would conversion of large areas of juniper woodland be consistent with these goals? Even recognizing that juniper is a species that responds positively to some forms of disturbance and its current distribution differ from the probable historical distribution? This information would be of value in evaluating the need for or scope of massive vegetation management efforts.

RESPONSE *Under natural conditions juniper occurs in relatively fireproofed areas such as rocky rims and low sage flats.*

Juniper has been expanding throughout the eastern half of the planning unit, primarily due to the suppression of naturally occurring fires. Prior to about 1900, naturally occurring fire maintained grasslands communities by removing juniper seedlings. Since 1900, aggressive suppression of wildfire has allowed juniper to invade these grassland communities.

Of the 64,800 acres of juniper woodland (see Table 3-33), only the invasive juniper stands would be treated. The Proposed Resource Management Plan identifies up to 1,000 acres of treatment per year (within the first decade) to help reverse the expansion of invasive junipers. These stands would be *treated by using mechanical and/or prescribed burning methods. The goal of these juniper control projects would be to restore native plant communities and increase forage.*

We have added information in the Proposed Resource Management Plan on juniper management to better describe the resource and our proposed project plans.

148 **COMMENT** Obviously, one of the limitations in the Klamath Falls Resource Area are the large stretches of discontinuous federal ownership. Conservation planning must focus on the areas which have significant public lands and be less concerned with areas that are predominantly private except when regulatory mechanisms are in place. Scattered sections of public lands that lie between larger blocks of public lands can act as connectivity areas (not just for spotted owls) for biodiversity and will require specific management to enhance the necessary attributes for habitat and migration.

RESPONSE *The second and third sentences of this comment seem to contradict each other. Nevertheless, as a first step for implementation of the Resource Management Plan, logical landscape units within the resource area will be defined that will go beyond political boundaries. Objectives for these units will be developed that will consider the mix of ownerships within the units, and the direction of BLM management within the unit will be influenced by the expected cumulative impacts on all ownerships within the landscape unit.*

149 **COMMENT** Grasslands were noted above as needing more attention... Woodlands and riparian areas are addressed and generally given better protection but they are not shown as making substantial contributions to biodiversity. Special Status species and special habitats are basically well protected in the Preferred Alternative...

What is missing, though, is an overall biodiversity conservation plan for the Resource Area. The elements of biodiversity are discussed in the Resource Management Plan but they are not put together in a comprehensive fashion that tells what is the desired effect or future condition of the Resource Area.

RESPONSE *Objectives for biodiversity have been added to the Biodiversity section of the Proposed Resource Management Plan. Also, objective statements have been added for specific resources that are components of biodiversity, such as special status species, special habitats, wildlife, etc. More specific objectives will be developed for each landscape unit designated within the planning area as an early step for implementation of the plan.*

150 **COMMENT** [In the KFRA draft Resource Management Plan/Environmental Impact Statement on] p.4-20, 1st column, 1st paragraph: Lemkuhl, Ruggiero and Hall's model included a number of amphibian species which do not occur in the KFRA (red-backed salamander (*Plethodon vehiculum*), northwestern salamander) or are peripheral (tailed frog, Cascades frog). Also, the study documents conditions in the "core" of the range of these species in a somewhat dissimilar environment. Nevertheless, the general conclusions warrant careful examination. When coupled with the fact that many of the sensitive species that would presumably be affected by habitat fragmentation are at the edge of their distribution in the KFRA it would seem logical to conclude that they might be even more vulnerable to the impacts noted. Therefore, additional consideration should be given to this situation in the design of buffers and management planning and practices.

RESPONSE *With the absence of more specific data for the Klamath Falls Resource Area, the cited reference is intended to give an idea of the direction and order of magnitude of the effects of habitat fragmentation on the diversity of species associated with late-successional communities found within the resource area, not necessarily the effects of the particular species analyzed in the cited study.*

Old Growth Forest

151 **COMMENT** The DEIS violates National Environmental Protection Agency by failing to adequately describe the complexity of old growth forests.

RESPONSE *Entire books have been written describing that complexity, which the Environmental Impact Statement recognizes. It is not appropriate for an Environmental Impact Statement to repeat at length general information previously published.*

152 **COMMENT** Preservation of old growth forests is impossible as trees have finite life spans.

RESPONSE *Although individual tree death is a natural part of old growth ecosystems, Morrison and Swanson (1990) and Agee (1991) showed that old growth Douglas fir ecosystems persisted on sites over many centuries. These ecosystems are renewed and regenerated by under-canopy and patchwork fire, and gap mortality. Our Environmental Impact Statement examines the ability of the different alternatives to provide old growth habitat within the general BLM-managed landscape. The loss of some older stands from wildfire and other causes, and the death of trees is assumed and is included in seral diversity analyses. It is also assumed that prescribed fire and other practices would sometimes be used to control seral changes within older stands which might cause them to deteriorate away from desired old-growth conditions (for instance shifting away from conifer dominance and toward tan oak dominance).*

153 **COMMENT** The old growth inventory should be corrected or augmented to identify old growth stands meeting the PNW-447 and GTR-285 definitions.

RESPONSE *We do not have a specific old growth (late successional stage) inventory. We have an operational inventory of timber stands within which late successional forests are located and their timber inventory attributes identified. These attributes include overstory and understory timber size, volume and age classes. An inventory of these forests to determine the character of old growth is under consideration while the broad range of features needed to be inventoried are determined.*

Late successional age classes are fairly evenly distributed over the general landscape. Approximately two-thirds of these stands currently occur in proposed reserves or special management areas. About one-third occur in the matrix. Additional inventory of these lands is expected and a determination of their late-successional values will occur in the plan implementation process.

154 **COMMENT** Old growth could be heavily impacted by density management and lose its habitat value.

RESPONSE *Stands meeting minimum old growth definitions are not proposed for density management. Density management is normally proposed only for stands under 80 years of age and must be expected to be beneficial to the creation of late-successional forest conditions. Density management of young mono-species/canopy plantations in Late-Successional Reserves is to focus on increasing diversity within stands through development of multiple canopies with a mix of species.*

155 **COMMENT** The amount of rare, old forest that will be lost if the Preferred Alternative is adopted is understated. In the long run only one-third of old growth emphasis areas will qualify as old-growth. No uncut, natural forest existing in old growth emphasis areas today will survive full implementation of the plans. Explain how clearcuts with minimal retention in old growth emphasis area, even with a 300-year rotation, maintain and enhance old-growth characteristics.

RESPONSE *This approach is no longer part of the Proposed Resource Management Plan.*

156 **COMMENT** Small old growth patches may provide necessary ecosystem functions, depending on the relative proximity of other old stands and the general structure of the landscape. Small patches may become quite valuable if they exist in the context of a natural stand that seals edges and provides connectivity. There is no evidence that BLM considered these factors in making land allocations.

RESPONSE *We agree that the matrix within which older forest patches exist is a significant component of wildlife habitat, as is the total landscape arrangement of habitat grains of various sizes, shapes, and seral stages. As specified in the Supplemental Environmental Impact Statement Record of Decision, project-level National Environmental Policy Act analysis will address affects on the remaining late-successional forests.*

157 **COMMENT** Old growth acreage should be reported by forest cover type.

RESPONSE *Reporting such information would be desirable but at this time that information is not available. As the forest plan is implemented and further old growth inventories are initiated, this information will become available. Unfortunately, data on the series, habitat type or plant association do not currently exist, although the approximate associations can be estimated by province and sustained yield unit. Dominant and understory forest tree information is available and is included in the final plan inventory of forest conditions.*

158 **COMMENT** The GIS technology should be used to identify patches of ancient forest embedded in mature forests that could develop interior conditions in the near future and to target other areas for restoration of interior forest habitat.

RESPONSE *Our Operations Inventory is not detailed enough to identify the features relevant to such projections. And our current geographic information system lacks image processing capabilities to identify and classify these areas. The geographic information system technology was used, however, to help select lands for late successional reserves which will provide much of the long-term interior old-growth forest on BLM-administered lands. Watershed analysis will further consider potential future landscape arrangements.*

159 **COMMENT** In order to meet the Federal Land Policy and Management Act, the BLM should preserve these ancient treasures (old growth) for the dwindling populations of dependent species and for future generations of people to enjoy.

RESPONSE *The planning area encompasses lands managed under Federal Land Policy and Management Act and Oregon and California Acts. The majority of the west side of the planning area is managed under the Oregon and California act. The majority of the east half of the planning area is managed under the Federal Land Policy and Management Act. Neither act has specific provisions to protect old growth forests.*

160 **COMMENT** If even the Preferred Alternative recommendation of retaining 6,800 acres of old growth forest is to actually be provided over time. The BLM has not made allowance that fires in addition to human and natural disasters will likely further reduce the total amount of mature and older forests remaining. Also, unlike most of the other BLM Districts the Klamath Resource Area has made no allowance for connectivity of identified old growth areas.

RESPONSE *Since large scale stand-replacing fires and other disasters can not be predicted and planned in advance, they have not been factored into the forest modelling. Adaptive management will address the locally unpredictable dimensions of catastrophic loss.*

The majority of the west half of the planning unit is classified as Matrix (general forest management area). The silvicultural prescription used to manage this area would develop three distinct canopy levels and various tree size classes. Within this general forest management area we have Late-Successional/ District Designated Reserves (1,600 gross acres) which protect old growth habitat. The uneven-age management practices within our Matrix (general forest management area) would provide connectivity across the landscape.

161 **COMMENT** Page 4-21, Mature and Old Growth Seral Stages [in the draft KFRA Resource Management Plan/Environmental Impact Statement]. This discussion should be expanded in the final document to clearly state 1) what presently exists (acres, block size, etc.) on the planning area and 2) what will remain both short and long-term under each alternative.

RESPONSE *For the short term please refer to figures 4-3, 4-4, and 4-5 on pages 4-24 and 4-25 of the draft Resource Management Plan/Environmental Impact Statement. Block acres were not calculated for the Proposed Resource Management Plan because management direction made the ten-year timber management scenario too imprecise for such forecasting.*

Ecosystem Management

162 **COMMENT** The checkerboard ownership pattern makes it unlikely that the ecosystem management objectives will be achieved.

RESPONSE *The Proposed Resource Management Plan approaches ecosystem management utilizing a variety of temporal and spatial landscape allocations. The BLM manages land that is mostly in a checkerboard pattern, it is true. The ecosystem management vision can not be achieved by BLM alone but through cooperation with other public agencies over a broad landscape. Such cooperation is a strong component of the Supplemental Environmental Impact Statement decision strategy.*

163 **COMMENT** Identify how silvicultural practices will lead to the goals of ecosystem management.

RESPONSE *Silvicultural systems define the sequence of management practices that take place over the life of stands in a managed forest to meet land management objectives. See Appendix G for structural retention and development of late successional stage systems. Structure in an ecosystem or community is the relationship of physical size, height and vertical stratification of vegetation. Managing younger stands with low levels of structural diversity toward more complex conditions is important in several land use allocations to meet non-timber objectives.*

164 **COMMENT** Specify methods for coordinating biodiversity and ecosystem management goals with other landowners, specifically the Forest Service and the State.

RESPONSE *The Supplemental Environmental Impact Statement Record of Decision addresses this topic primarily in the Interagency Coordination discussion in section E of its Attachment A.*

165 **COMMENT** The silvicultural systems proposed bear no resemblance to natural processes that should be emulated in a program of genuine ecosystem management. The overall effect of the intensive management regime proposed will be a highly fragmented landscape with some stands of old growth trees but few - if any - other characteristics of an ancient forest ecosystem. Even the pattern of residual trees bears no resemblance to natural mortality. Natural catastrophic fire would leave many well-distributed snags and clumps of green survivors. The scattering of residual trees proposed would not likely survive the first major winter storm.

RESPONSE *The rationale for partial tree retention is not so much to precisely parallel natural processes as it is to provide a biological legacy and maintain long-term site productivity. See the Forest Ecosystem Management Assessment Team report, page IV-34. A legacy is something passed on from one generation to future generations. Like trees which survived catastrophic fires or windstorms, retained legacy trees will be both well distributed and clumped, and would provide a source of seed as well as important habitat components such as large green trees, snags, and eventually, large down logs. While blowdown and breakage is a problem in some locations, experience indicates that most retained trees would remain standing for many years.*

Vegetation

166 **COMMENT** Contrast the differences between early successional stages resulting from natural processes and those resulting from silvicultural prescriptions.

RESPONSE *The structural differences between seral stages resulting from various levels of natural stand replacement and conventional, even-aged management are shown in figure 3-V-2. Silvicultural systems can produce early seral stages with a wide variety of structures and compositions depending on the approach taken, including structures and compositions which resemble those originating from natural processes.*

167 **COMMENT** The plans should include a detailed summary of forest age class distribution through time, with a separation of two-stage and multistage stands.

RESPONSE *Such projection would be complex and time consuming and would be unreliable until most watershed analyses are done. We believe it would have little utility without information on spatial distribution, which cannot be projected.*

168 **COMMENT** The importance of conserving relatively rare hardwood forests is virtually ignored. Conversion of hardwoods to conifers should be approached with caution, as there are ecological reasons why many sites are dominated by hardwoods.

RESPONSE *Conversion is proposed only in the general forest management area on sites considered natural conifer sites where past management led to conversion of the site from conifers to hardwoods. The Proposed Resource Management Plan provides for the retention of existing natural hardwood stands and their management for the sustained yield of hardwood resources. Species diversity requirements for reforestation actions, prescribed fire treatments, and subsequent stand management will assure the retention of native hardwood species within stands considered for active management as a result of watershed analysis.*

169 **COMMENT** Display current acreage of major hardwoods groups in conifer dominated stands, mixed conifer-hardwood stands and hardwood dominated stands. A further breakdown into seral hardwoods and hardwoods commonly present throughout the life of a stand would be helpful. Display projected changes in these hardwood acres by alternatives.

RESPONSE *Current data is incomplete and we have little basis for projecting future conditions in a quantified way.*

170 **COMMENT** Address threats (including those on private lands) to oak and other deciduous woodlands. Identify specific management plans for all hardwood stands.

RESPONSE *Where BLM management maintains oak and other deciduous woodlands, an analysis of threats to these stands in other ownerships is beyond the scope of the Resource Management Plan/ Environmental Impact Statement. Specific management plans for such stands would be a component of implementation plans as a result of watershed analysis.*

171 **COMMENT** Develop and display goals, objectives and prescriptions for maintaining hardwoods, minor conifer species and shrubs.

RESPONSE *Objectives have been added regarding native plant communities and species. Prescriptions are implicit in the management actions/direction, but would be site-specifically developed in implementation plans as a result of watershed analysis.*

172 **COMMENT** Address how current and proposed management complies with the Pacific Yew Act. Do this in addition to the separate Environmental Impact Statement, prepared by the Forest Service with BLM cooperating.

RESPONSE *Such duplication is neither efficient nor appropriate.*

173 **COMMENT** The Pacific Yew Act effectively bans even-aged management and slash burning in yew habitat. The draft Resource Management Plan fails to adequately protect yew trees. The Pacific Yew Act may also require replanting of yew to the same stocking levels as before harvest.

RESPONSE *As long as the Act remains in effect, Resource Management Plan implementation actions in Yew habitat will conform to its terms.*

174 **COMMENT** The Draft Environmental Impact Statement violates the National Environmental Policy Act because it fails to disclose how long the proposed yew bark harvest rates can be sustained.

RESPONSE *The Resource Management Plan/Environmental Impact Statement does not propose any specific rate of yew harvest. A permissible rate of harvest from National Forest System and BLM-administered lands was identified in the Record of Decision on the joint BLM-Forest Service Pacific Yew Management Environmental Impact Statement, and its sustainability was analyzed in that Environmental Impact Statement.*

175 **COMMENT** Disclose where suitable mushroom habitat exists and the environmental impacts of logging on mushroom populations.

RESPONSE *Data on suitable mushroom habitat is currently limited. The distribution and abundance of these species has not been determined on most BLM - administered lands. Chapter 4, Vegetation, has* *been expanded to address such impact concerns. In general, mushrooms that are shade tolerant would be favored under Alternatives C, D, and E. Harvest of mushrooms would be done in compliance with appropriate National Environmental Policy Act regulations and will be consistent with ecosystem management principles. The final BLM Task Force Report,* Managing Special Forest Products in Oregon/Washington *was approved by the BLM State Director on March 31, 1993. It recommended that the BLM identify inventory, monitoring, and research needs that reflect the biological sensitivity, public demand, and interest in any given species of special forest products.*

The BLM Forest Ecosystem Inventory Handbook, published in October 1993 allows for collection of data on mushroom species, quantity, and quality. This inventory has begun. Several research studies have been proposed to investigate the productivity and ecological habitat of noxious mushroom species. They would involve the BLM, the US Forest Service Pacific Northwest Research Station, and the National Biological Survey.

176 **COMMENT** Harvest of minor forest products (such as salal, beargrass, ferns, moss and fungi) should be more carefully managed. Collection of such products should be by permit only, and should be monitored and enforced.

RESPONSE *Discussions of management for such products has been added to Chapter 2, and a related element has been added to the monitoring plan. Although authorized harvest would be by permit only, monitoring and enforcement will not be totally effective due to the scattered locations of the resources.*

Riparian Zones

177 **COMMENT** Define expected future condition for riparian management areas.

RESPONSE *Objectives which do this for Riparian Reserves have been added for the Proposed Resource Management Plan, derived from the Aquatic Conservation Strategy objectives in Supplemental Environmental Impact Statement Appendix B6.*

178 **COMMENT** Establish standards for all stream orders, reflecting functional and ecological differences between orders. These factors should ensure shading, water quality, microclimate, floodplain protection, and critical habitat for wildlife and sensitive species.

RESPONSE *The Aquatic Conservation Strategy described in Appendix B6 of the Supplemental Environmental Impact Statement requires that watershed analysis be a principal analytical foundation for management actions. Watershed analysis is required in key watersheds prior to land management and will eventually be accomplished for all watersheds. The information from watershed analysis will guide management prescriptions, including refining boundaries of riparian reserves, and developing restoration strategies and priorities.*

179 **COMMENT** Address riparian area management at the watershed or landscape level, reflecting the current condition of watersheds.

RESPONSE *Riparian Reserves are described in Appendix B6 of the Supplemental Environmental Impact Statement. Standards and Guidelines prohibit activities in Riparian Reserves that retard or prevent attainment of the Aquatic Conservation Strategy Objectives. Widths of Riparian Reserves are based on ecological and geomorphic factors. Those widths apply until watershed analysis is completed, a site-specific analysis is conducted and described, and the rationale for final Riparian Reserve boundaries is presented and approved.*

180 **COMMENT** Clarify how average widths shown for RMAs are utilized in on-the-ground analysis. Include both the documentation and the mechanisms to fully protect all beneficial uses for riparian areas including wetlands.

RESPONSE *Refer to the response to comment number 188. Watershed analysis will identify the riparian reserve widths needed on specific stream reaches, wetlands, or other water bodies, to meet Resource Management Plan objectives. Aquatic Conservation Strategy Objectives would be met by completing watershed analysis (including appropriate geotechnical analyses) prior to construction of new roads or landings in Riparian Reserves.*

181 **COMMENT** It is inappropriate to allow roads in riparian management areas to access timber harvest in other areas.

RESPONSE *Construction of roads upslope and near ridges is normally preferred, but occasionally construction within (but toward the outer edge of) a riparian reserve may reduce the total road length needed for harvest access by so much that it is considered environmentally preferable to build the shorter road. Any road construction in riparian reserves would occur only after watershed analysis.*

182 **COMMENT** The BLM's proposed riparian management on perennial streams is only about half as wide as recommended by the Scientific Panel on Late-Successional Forest Ecosystems, which said, "Establishing wider riparian corridors on federal lands across the landscape will provide additional protection from disturbance and help initiate recovery of degraded areas."

RESPONSE *In the Proposed Resource Management Plan, Riparian Reserve widths on perennial streams have been expanded to the widths recommended by the Scientific Panel.*

183 **COMMENT** If riparian buffers are not at least three times the height of the tallest trees, windthrow over time will negate the design of the buffer.

RESPONSE *Wind firmness varies among sites. We do not believe such a generality is true.*

184 **COMMENT** Restoration of riparian areas in poor or deteriorating condition should be a high priority.

RESPONSE *Priority will be given to restoration of degraded riparian areas. Watershed analysis will help identify priority areas. Key watersheds will have particular emphasis.*

185 **COMMENT** Riparian management area width should be appropriate to meet water quality standards, supply potential large woody debris and down wood, and manage for sensitive riparian-dependent species within a landscape context.

RESPONSE *The Proposed Resource Management Plan riparian reserve widths aim at all these objectives. The opportunity to meet all of them (such as large woody debris) will not occur for many decades along some stream reaches.*

186 **COMMENT** Plant conifers within hardwood-dominated riparian areas.

RESPONSE *This will be incorporated in watershed restoration efforts where appropriate.*

187 **COMMENT** Since tree diameter was selected as a measure of riparian zone health, indicate how diameter thresholds were selected.

RESPONSE *The diameter thresholds were those available from our current extensive forest inventory (the operations inventory), which divides forest stands into four diameter classes. The largest class, above 21 inches, was defined as best (good/optional). The second largest, 11 to 21 inches, was defined as next best (fair). The others were defined as poorest (minimal).*

188 **COMMENT** Since the Resource Management Plan/Environmental Impact Statement determines riparian zone forest age and size based on the timber operations inventory for adjoining upslope trees, address the inventory's accuracy in riparian zones.

RESPONSE *Analysis of the information obtained indicates a general relationship between the age and composition of the riparian community and the instream woody structure that creates fish habitat. The relationship is far from absolute, but the vegetation is a good general indicator of the overall health of a system. In the absence of detailed data on all streams, we elected to use vegetation information as the best method for approximating stream health.*

It is not appropriate for the Klamath Falls Resource Area to use the diameter (size) of conifers in the riparian-wetland areas as the only indicator of its condition, because many riparian-wetland contain mostly herbaceous species rather than predominantly brush and conifers. Furthermore, the presence or absence of trees reflect conditions resulting from grazing, which affects most of the riparian-wetland areas and therefore needs to be considered. Therefore, present riparian-wetland conditions were determined by two methods: for the west side, inventory data obtained from 1980 to 1982 and in 1990 by the BLM's Medford district was used along with interdisciplinary input to account for changes in riparian-wetland condition that may have occurred since then; for the east side, qualitative data, such as photos taken on regular time intervals at established points in riparian-wetland areas, and interdisciplinary input were used. A systematic re-inventory of west side riparian-wetland areas, as well as quantitative initial inventory of east side riparian-wetland areas would provide more up-to-date information about riparian-wetland conditions.

189 **COMMENT** Provide tree species and density data and describe factors that may limit future riparian zone maintenance and production, such as water table alteration, in the riparian analysis.

RESPONSE *Neither our forest inventory data nor other data are consistently specific enough to be considered valid for this purpose in riparian zones. Watershed analysis is expected to begin to address such concerns.*

190 **COMMENT** The [KFRA] draft plan fails to adequately inventory riparian condition by stream mile or segment, wetland conditions, or overall ecological conditions of grazed lands.

RESPONSE *The identified condition or status of riparian, wetland, and upland areas, within the Klamath Falls Resource Area, is based on the best information available at the time of writing the draft Resource Management Plan/Environmental Impact Statement. Refer to the Chapter 3 sections on Vegetation and Riparian-Wetland Areas for the most current information.*

191 **COMMENT** The riparian management area allocations/prescriptions for the Preferred Alternative in Klamath District is difficult to decipher. There appears to be an error for Stream Order 6. Was the number supposed to be 240 feet? Specific direction for intermittent stream riparian management areas is unclear and confounded by stream classifications/descriptions in the appendix.

RESPONSE *The riparian management area for stream orders six and above was meant to be 240 feet in the draft Preferred Alternative. The discussions of Riparian Reserves and intermittent stream protec-*

tion have been rewritten to improve clarity and to incorporate guidance from the Supplemental Environmental Impact Statement Record of Decision.

192 **COMMENT** If BLM is going to rely on the FERC Environmental Impact Statement for a site-specific analysis of Project impacts, the reliance should be honestly reflected in the [KFRA] draft Environmental Impact Statement. The FERC Draft Environmental Impact Statement concluded that there would be some scenic impact because of construction of the powerhouse and because of the cut and fill line that would be visible. The FERC Environmental Impact Statement also stated that these negative impacts would be more than offset by improvement to the fisheries, by improvement to the flow and water quality regimen and by improvement to the socioeconomic condition of Klamath County. The BLM's Draft Resource Management Plan/Environmental Impact Statement does not accurately reflect these FERC conclusions.

RESPONSE *The City of Klamath Falls has resubmitted its water quality application to the Oregon Department of Environmental Quality for a new Salt Caves proposal. Due to the late date of the City's resubmitted proposal during the Resource Management Plan preparation and printing process an evaluation of the new proposal was not possible at this time. A thorough evaluation of the new proposal will occur at a later date.*

Refer to Comment number 121. The Federal Energy Regulatory Commission's statement relating to improvement to the fisheries was based upon several items: Construction of a spawning channel, stabilized river flows, and installation of instream structures.

Several of these items were affected by mitigation of other impacts for example water releases for rafting would affect the benefits of stabilized river flows, the spawning channel would not be constructed under the no dam alternative, and the Oregon Department of Fish and Wildlife believes that the volume of the stabilized river is insufficient to be beneficial to fish.

The BLM is not required to accept the conclusions that the Federal Energy Regulatory Commission reached in its Environmental Impact Statement.

In regards to scenic impacts from the construction of the Salt Caves project, the only acceptable mitigation for projects that affect visual resources are methods that modify and minimize the potential visual impacts (BLM Manual H-8431-1). Negative impacts cannot be offset by improvements to other resources, such as fisheries or water quality, which do not improve scenic quality.

193 **COMMENT** Both the Preferred Alternative and Alternative E [of the draft KFRA Resource Management Plan/Environmental Impact Statement] place too much emphasis on livestock production. The Oregon Department of Fish and Wildlife estimates that 62% of the east side allotment acres and 28% of the west side allotment acres are in unsatisfactory condition. The condition of the range and riparian zones for each allotment needs to be describe in detail in the Resource Management Plan with a plan for how poor range and riparian conditions are be improved. The health of the riparian area should be quantified in the context of overall species diversity, willows and other woody species, not just the condition of the grass species alone.

RESPONSE *These quoted estimates of unsatisfactory condition rangelands are apparently based on the percentages of public land acres that are within "I" and "M" category allotments on each side of the Klamath Falls Resource Area. That all of this land is in unsatisfactory condition is an erroneous assumption for several reasons. First, the figures include "M" category allotments which are by definition in satisfactory condition (see Appendix L in the Proposed Resource Management Plan/Environmental Impact Statement). Second, although an allotment may be classified in the "I" or Improve category, it does not mean that all of the acres within the allotment are in unsatisfactory condition. Most of the 14 "I" allotments within the Klamath Falls Resource Area are at least partially classified as such because of riparian/wetland concerns. In almost all of these allotments, the majority of the upland acreage (and thus* *majority of the overall acres) are judged to be in appropriate or "good" condition. Since the Klamath Falls Resource Area has not had an ecological site inventory performed, the above estimate is based on professional judgement considering on-the-ground experience and knowledge. Since the ecological site inventory has not been initiated within the Klamath Falls Resource Area, a description of current conditions can not be included in the Resource Management Plan. Range and riparian condition assessment would occur during activity-level planning for a grazing allotment. Specific range and riparian improvement projects may be planned to meet resource condition and management objectives. Site specific monitoring and inventory data on resource conditions need to be evaluated thoroughly to set these objectives and to plan projects. This is most appropriately done at the activity-planning level. The health of riparian areas would be evaluated in relation to whether they are achieving proper functioning condition, of which vegetation is a part. The presence of woody species in those riparian zones where it should occur can indicate proper functioning condition.*

194 **COMMENT** ...the Lakeview District of BLM has some small 20 acre project in mind primarily to cut invasive junipers in riparian areas. The Klamath Resource Area needs to clearly state what its proposals and management objectives are at this time. The BLM claims that manipulation is not focused on improving grazing with juniper manipulation, but many of their projects are on major allotments where grazing can negate any long term improvements that might be had by some clearing.

RESPONSE *As stated on page 2-65 of the draft Resource Management Plan/Environmental Impact Statement, Vol. 1, "Resource benefits of clearing juniper would be increased forage for livestock and wildlife, and watershed enhancement." The specific design and post juniper removal grazing management techniques would be determined on a project specific basis under the Proposed Resource Management Plan.*

195 **COMMENT** Page 3-40, Table 3-16 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The Range location of those east side wetlands beginning with Ben Hall creek and ending with Round Valley reservoir need to be verified. I also find it odd that there are not wetlands associated with Gerber reservoir except for Barns Valley and Ben Hall creeks. Please explain.

RESPONSE *Since this draft chapter was written, the Klamath Falls Resource Area has received Draft National Wetlands Inventory maps from the U.S. Fish and Wildlife Service. These maps have been used to update the information in this table.*

196 **COMMENT** According to the [KFRA] DEIS, (Vol 1 p. 3-11), watershed conditions on the east side have not been surveyed since 1971. A similar lack of information exists on range conditions on the east side. It is impossible for BLM to make appropriate management decisions or evaluate present policies without this extremely basic information.

RESPONSE *Prescriptions for management of watersheds will be completed in the analysis of planned management activities. Appropriate protection will be afforded these lands consistent with BLM and program-specific guidance.*

197 **COMMENT** I understand [the KFRA] BLM took down the riparian exclusion fencing along Long Branch Creek, in favor of wider riparian pastures. I am skeptical of this approach. I see it as a means of avoiding maintenance of the exclusion, which may be realistic but is hardly desirable.

RESPONSE *Riparian exclosures were removed from areas on Pitchlog Creek and Barnes Valley Creek. The exclosures on Long Branch Creek are still in place. High maintenance was the main reason for removing the others. These areas are now part of a four pasture rest-rotation system with early season grazing. This system will allow for yearly regrowth of riparian and upland vegetation and complete rest for each pasture every fourth year.*

198 **COMMENT** Page 2-63, Water Quality of Riparian Zones [in the draft KFRA Resource Management Plan/Environmental Impact Statement]. Shifting from stream order to stream class, even after reading Appendix 2-B, makes this discussion of buffer width difficult to understand. It would be improved if it clearly and concisely described where and to what extent buffers will be used under the PA.

Page 2-79, Table 2-1. From the table, it appears that only 3.6 percent (7,642 acres) of the planning area is riparian or wetland habitat. Its protection would not appear to be a major commitment of land, especially when the attributes of these areas are considered. In view of the above, the Service strongly recommends the Preferred Alternative or selected alternatives include standards to protect all riparian and wetland habitats as proposed under Alternative E, with the exception that selected timber harvest - not included in the allowable sale quantity and grazing be considered to achieve biodiversity goals and ecosystem function. Further, this table indicates that under Alternative D more acres would be covered by riparian management area's on the east side than under Alternative E. The final document should explain this, considering that Alternative E provides for equal or wider buffer widths. Pages 3-36 and 3-48, Riparian Zones. The attributes of riparian areas described under this section provides excellent justification for protecting all riparian habitat (7,642 acres or only 3.6 percent of the planning area) on all streams, including intermittent as well as perennial. The Service suggest the selected Alternative include protection of all riparian habitat.

RESPONSE *Riparian Reserve widths, derived from the Aquatic Conservation Strategy in the Supplemental Environmental Impact Statement, have been incorporated into the Proposed Resource Management Plan. Specific direction for management of intermittent streams has been incorporated into the Proposed Resource Management Plan. Language has been added to the Proposed Resource Management Plan to address "proper functioning condition", which is a similar objective to the one you cite for Alternative E.*

199 **COMMENT** Page 2-5 Riparian Zones [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The Resource Management Plan states that riparian zones will be managed to provide bank stability for 90% of the banks. It is not clear if this represents a percentage of linear distance, or of area within a riparian zone. The difference between these two could be significant in the case of a laterally cutting bank failure.

RESPONSE *This objective has not been carried forward into the Proposed Resource Management Plan. In its place is an objective to reach properly functioning condition in riparian-wetland areas. In certain instances as a stream recovers, some bank failure could continue to occur, although objectives for improvement are still being met. The absence of stream bank erosion is only one component of proper riparian area function.*

200 **COMMENT** Page 2-6 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]: Grazing management practices should allow and maintain riparian plant communities, not just grass, in healthy condition, providing for biodiversity.

RESPONSE *Grazing management practices have been and will continue to be designed to achieve the goals of the BLM's "Riparian-Wetland Initiative for the 1990s". This plan sets forth the goals of restoring and/or maintaining riparian-wetlands so that 75 percent are in proper functioning condition by 1997. Riparian plant community objectives are consistent with the initiative and inevitably emphasize a variety of plant species. The primary objective for riparian management, however, will be to achieve proper functioning condition (refer to the Proposed Resource Management Plan/Final Environmental Impact Statement for more information).*

201 **COMMENT** Page 4-18, 2nd paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. This paragraph states that reduced livestock grazing in riparian zones under Alternatives C, D, E, and PA would help "offset" potential cumulative sediment and temperature effects. It would be more accurate to state it could reduce these effects as opposed to offset these effects.

RESPONSE *The wording in that statement has been changed to reflect your comment.*

202 **COMMENT** P. 2-6, 2nd column, 1st full paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. This statement needs further documentation and clarification, either here or in the appendices or specific sections. In particular, the use of the terms "regrowth", "sufficient vegetation", "maintenance of plant vigor and streambank protection" need rigorous quantification both in terms of time frames, criteria for species diversity, biomass (relative and area-specific) and documentation of the effectiveness of these efforts in the scientific literature. Without this information, evaluation of the general short- and long-term consequences of this proposed strategy is unlikely to be successful.

RESPONSE *The discussion of riparian-wetland area management in Chapter 2 has been expanded to include more specific information on goals and objectives for the management of these areas. Design of specific, quantified management standards would occur at the activity-planning level, when monitoring and inventory data would be gathered to determine site potential, management constraints (both human-caused and natural), and desired condition. Some of the criteria you suggest have not been addressed in the literature, or have not been determined for the planning area. The need for further research in many aspects of land management has been acknowledged throughout the Proposed Resource Management Plan/Final Environmental Impact Statement.*

203 **COMMENT** p.2-63, 1st column, 2nd paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. This section deals with proposed buffers in relation to stream order. It would be useful to include in any subsequent publication the documentation for the derivation of the "effective" width of the proposed buffers, as has been done for other activities such as timber harvest. The assumptions inherent in the development and use of any such model or procedure need careful examination. While I am aware that BLM has general information available on the subject, details of the area-specific parameters and assumptions would be of tremendous value in assessing the suitability or possible need for modifications of the process.

RESPONSE *The determination of buffer widths was an ongoing process that offered interested individuals several opportunities to comment. Appendices 1-D and 1-E in the draft Resource Management Plan/Environmental Impact Statement described the scoping process and the development of the State Director's Guidance for the Resource Management Plan, which outlined proposed buffer widths for the various alternatives. The Supplemental Environmental Impact Statement provides discussion on the assumptions and research used in the development of Riparian Reserve widths.*

204 **COMMENT** In Appendix 1-20 [of the draft KFRA Resource Management Plan/Environmental Impact Statement] it was noted that "An alternative that would protect a minimum of 1/4 mile wide riparian management areas along third-order and higher streams, Class I streams and other waters; and maintain and enhance water quality at the highest level of water quality required for municipal use. Such an alternative would exclude almost all commercial forest lands from timber management. Such extensive riparian management area's would be far in excess of what is needed to protect water quality and riparian values. Thus it was considered outside the range of reasonable alternatives". It would be of considerable value to examine the rationale for this exclusion. Documentation of assumptions, cost-benefit analyses, and possible weighting of other factors would allow for examination of the considerations behind this decision. Similar arguments could be made for other alternatives, and a more thorough discussion of the rejected alternatives would seem to be warranted.

RESPONSE *Appendices 1-D and 1-E of the draft Resource Management Plan/Environmental Impact Statement described the scoping process and the development of the State Director's Guidance for the Resource Management Plan. The decision not to include 1/4-mile wide riparian management areas was made during these processes, in response to public comments, and through internal discussions.*

Wildlife

205 **COMMENT** Road closure programs and limited recreation access during periods critical to elk can effectively mitigate the security needs of the species. The alternatives which are most likely to negatively effect elk are Alternatives C, D, E and to a slightly lesser extent the BLM's Preferred Alternative.

RESPONSE *The Proposed Resource Management Plan has objectives for road access management that are not found in Alternatives NA, A, or B. This access management is one of the features incorporated into the Proposed Resource Management Plan specifically to reduce adverse impacts to elk. Habitat analysis was accomplished using the Wisdom model, the most widely accepted model for this purpose. This analysis showed the Proposed Resource Management Plan to be one of the best alternatives for elk management.*

206 **COMMENT** In the analysis of wildlife populations, spatially explicit models were not used (excepting for spotted owls) and hence projections may be overly optimistic.

RESPONSE *Spatially explicit models do not exist for most wildlife species, but another one used was the ilk model. The best available models that could be applied using BLM's data base were used in the analysis of effects.*

207 **COMMENT** There is an overreliance on riparian zones for meeting the needs of wildlife communities. Many of the upland species habitats are not considered.

RESPONSE *We disagree that there is an overreliance on riparian zones. Upland habitats will be maintained or enhanced in significant amounts in Late-Successional Reserves, connectivity/diversity blocks, and special management areas.*

208 **COMMENT** The wildlife species have been aggregated into groups that are inappropriate for assessing viability.

RESPONSE *Aggregating wildlife species into groups with similarities in habitat requirements complements the concepts of ecosystem management. We acknowledge that there are some differences between species needs in a particular group (for example, amphibians), but there are also broad similarities which can be dealt with more suitably in the development of forest plans often affecting hundreds of thousands of acres. One of the intended advantages of ecosystem management is to avoid the problems inherent on a species-by-species approach; primarily those of conflicting habitat requirements of individual species. A goal of ecosystem management is to provide a balance of all potential natural vegetation communities suitably distributed across the landscape. Viability assessment is primarily provided by the Supplemental Environmental Impact Statement and the Forest Ecosystem Management Assessment Team report.*

209 **COMMENT** Animal species which occur within the planning area, but with no known occurrence on Bureau lands, should be suspected as occurring on Bureau lands unless adequate inventory work shows otherwise.

RESPONSE *True, except where strong field evidence dictates otherwise.*

210 **COMMENT** The effectiveness of Connectivity Areas as corridors for wildlife movement has not been adequately addressed. Consider their width, current habitat fragmentation within the corridors, the effect of timber harvest on habitat mosaics including anticipated patch size, land ownership pattern and the different dispersal needs of wildlife.

RESPONSE *In the Resource Management Plan, the concept has been revised. Connectivity/diversity blocks will not be confined to specific corridors but will be spread out across the landscape. The idea is to enhance biodiversity and to help provide for dispersal of mobile wildlife species. Their effectiveness for the latter purpose is unknown, however, as dispersal needs of most species have not been researched.*

211 **COMMENT** Identify the species expected to benefit from connectivity areas, and their expected function for each species. Evaluate the ability of the areas to provide these functions, relating to their locations, width and proposed management. Address their lowest condition expected relative to old growth characteristics and its relation to desired future condition.

RESPONSE *Not enough is known about the mobility patterns of species to permit a species-by-species discussion of the value of these areas.*

212 **COMMENT** Identify the role and value of shrubfields as wildlife habitat. Assess whether any species are dependent on these shrubfields.

RESPONSE *The value and role of brushfields and hardwoods are addressed in the Wildlife Habitat sections of Chapters 2 and 4. In Chapter 4 the impacts are addressed by category of animal. Discussions of brushfields are also found in the Vegetation section of Chapter 3.*

213 **COMMENT** A 100 or 150 foot riparian management area for lakes, and ponds and other waterbodies may not adequately maintain or protect the inherent value and habitat use of the waterbody and adjacent zone, especially for fish-eating raptors.

RESPONSE *The Proposed Resource Management Plan expands this width for lakes and natural ponds. All such buffer widths may be adjusted after watershed analysis, based on site specific characteristics.*

214 **COMMENT** Conduct a district-wide inventory of sensitive wildlife areas and areas with currently high densities of off-highway vehicle use.

RESPONSE *A partial district-wide inventory of sensitive wildlife areas has been accomplished (such as nest sites of ospreys, great blue herons, marbled murrelets, bald eagles, spotted owls). Gathering updated information as well as additional species data will be part of monitoring and continuing inventory. No high use off-highway vehicle areas are known to exist in the Klamath Falls Resource Area. However, several areas that receive low to moderate off-highway vehicle use (primarily on existing roads), such as the Pokegama wildlife area and the Klamath River canyon will receive new off-highway vehicle use restrictions in the Proposed Resource Management Plan. Other sensitive wildlife areas will be identified and any recreation issues resolved during watershed analysis or other activity level planning.*

215 **COMMENT** Provide management consideration for all species contained on the district that are described the Oregon Department of Fish and Wildlife's 1992 "Sensitive Vertebrates of Oregon".

RESPONSE *Most of the species listed in the Oregon Department of Fish and Wildlife's 1992 list of "Sensitive Vertebrates of Oregon" are addressed as Special Status Species in the Proposed Resource Management Plan/Final Environmental Impact Statement.*

216 **COMMENT** A more formalized risk assessment regarding old growth sensitive species is needed. Alternative E could serve as a benchmark.

RESPONSE *Risk assessment regarding such species was accomplished in the Environmental Impact Statement.*

217 **COMMENT** Address how BLM proposes to improve marginal elk forage conditions and to meet habitat effectiveness and herd number objectives.

RESPONSE *We propose to conduct some forage seeding to improve elk habitat. The cover quality and spacing indices would likely be improved by establishment of reserves and connectivity/diversity blocks. We also propose a variety of road closure or access limitation measures to reduce road density levels.*

218 **COMMENT** Where feasible, expand forage seeding programs to benefit big game.

RESPONSE *We propose to do some forage seeding. However, this program will necessarily be limited by the reduced level of clearcutting and burning under the Proposed Resource Management Plan. For example, past observations indicate that forage germination is best after burning has produced black ash seedbeds. This condition is expected to be limited in the future. We are also considering the use of native forage species in future forage enhancement projects. Unfortunately, lack of a reliable source of seeds for native species may also limit our forage enhancement program.*

219 **COMMENT** The method used to analyze effects on elk populations is flawed. The importance of "optimal thermal cover" to elk is grossly exaggerated. The fastest increase in elk populations ever recorded occurred in the Mt. St. Helen's blast zone, where optimal thermal cover does not exist. There is no evidence suggesting that "winter kill" of elk, which thermal cover attempts to ameliorate, is a problem in western Oregon.

RESPONSE *The Wisdom Model is considered the most widely accepted professional model to analyze elk habitat condition at this time. It was developed by professional biologists and represented the best information at the time of its development. Validation of the model is the subject of a research study currently being conducted by Oregon State University in conjunction with BLM. The Wisdom Model was developed for forest ecosystems, not blast zones.*

220 **COMMENT** Reevaluate elk habitat conditions using all four habitat variables in the Wisdom model. Identify the current habitat effectiveness for the four variables by sub-watershed. Include private lands in the assessment.

RESPONSE *Application of the Wisdom Model to BLM-administered lands was modified to reflect shortcomings in the BLM's existing database. For example, we currently do not have sufficient vegetation data on private lands to permit an automated analysis of existing elk habitat condition over all ownerships. This limitation was shared with Oregon Department of Fish and Wildlife at an early phase of our analysis. We have, however, developed an automated analysis to evaluate elk habitat condition on BLM-administered lands using the forest inventory database. Three of the four indices are readily calculated using this* *method. The fourth index, the spacing index, can be calculated using automated methods but it is fairly cumbersome and time-consuming. With scattered private lands in many of the analysis areas, calculating the spacing index for only BLM-administered lands may be less meaningful than the indices produced for the other three variables. The Oregon Department of Fish and Wildlife has developed criteria to approximate the spacing index by using proportions of cover and forage.*

Our automated procedure produces area tables to calculate habitat effectiveness indices and graphical outputs to display habitat condition. The procedure also produces acres of private lands within the analysis area (for example, watershed or some other polygon). Thus, estimates of elk habitat condition on private land can be made and proportionally related to total acres of private land. Due to the very limited amount of thermal and optimal thermal cover on private lands, plus the lack of forage seeding on much of this land, index levels are anticipated to be even lower than calculated values for BLM-administered lands only. This was the case in one sample district where this analysis was done using our gross vegetation theme as the database from which estimates on private land were made.

Evaluation of elk habitat condition was not extended to the subwatershed scale because we believed this to be most properly evaluated during watershed analysis as part of implementation planning than at the Resource Management Plan/Environmental Impact Statement level. This was also discussed with Oregon Department of Fish and Wildlife in the initial phases of our analytical work. At least one district used watersheds for the Resource Management Plan/Environmental Impact Statement analysis, but these areas were much larger than the 1-6,000 acre level suggested by the Wisdom model. However, these large watersheds can be subdivided into smaller subwatersheds which could serve as permanent compartments to keep records on elk habitat condition.

221 **COMMENT** Set measurable goals for elk habitat effectiveness on a subwatershed basis. Develop these goals in concert with Oregon Department of Fish and Wildlife.

RESPONSE *Goals have been developed by Oregon Department of Fish and Wildlife and are delineated in an Oregon Department of Fish and Wildlife document entitled "Plan Review Criteria to Conserve Fish and Wildlife Resources on Bureau of Land Management Forest Lands in Western Oregon."*

222 **COMMENT** Establish habitat goals to reduce bull elk vulnerability to harvest and relate to Oregon's elk plan.

RESPONSE *The goals established by Oregon Department of Fish and Wildlife for our elk habitat effectiveness indices are related to Oregon's elk plan.*

223 **COMMENT** Display the amounts of early successional stages in each alternative during the first decade. Identify the consequences to wildlife species heavily dependent on these stages.

RESPONSE *The basic assumption underlying the analysis of effects in Chapter 4 is that timber harvest on the intermingled private lands within and surrounding the BLM operating area will provide adequate amounts of suitable early successional habitat for species dependent only upon the early seral stage - regardless of the alternative chosen by the BLM. Our planning alternatives would add varying amounts to this base. Many species that use the early seral stage for one or more life needs are also dependent upon the presence of other habitat components within the early seral stage, such as snags, fallen trees (logs), residual green trees, etc. Consequences to these species are described in Chapter 4; see, for example, Purple Martin and Western Bluebird under "Effects on Special Status Species", and Secondary Cavity Users under "Effects on Wildlife".*

224 **COMMENT** Identify concrete proposals to create snags, including estimated budgets. Adjust the allowable sale quantity to account for snags created over time.

RESPONSE *Among the objectives of the Proposed Resource Management Plan are to manage forest lands so as to retain 1) specific amounts of potential snag habitat following timber harvest, and 2) all existing snags to the extent possible given essential considerations for worker safety. Amounts of timber volume to be foregone for this purpose have been estimated and the probable sale quantity adjusted accordingly. The Proposed Resource Management Plan commits to provide the specified amounts of habitat through a combination of methods including retention of existing snags and creation of snags from green trees through timber sale contract requirements and by separate projects, whichever is the most efficient use of public money. "Concrete proposals" to create snags can be developed only on a site-specific basis. Such proposals will be identified in implementation plans which follow completion of the Resource Management Plan.*

225 **COMMENT** Clarify assumptions and goals in modeling green tree retention and snag creation.

RESPONSE *The goal of snag modeling is to describe the process of snag management and quantify impacts on both the timber and wildlife resource. There are three basic assumptions:*

1. *Green trees retained following timber harvest will be converted to snags at future points in time so that adequate amounts of snag habitat will be available through the life of the new stand.*
2. *Concerns about worker safety will prevent retention of all existing snags and in some situations snags will have to be created from green trees after timber harvest.*
3. *Green trees and snags left after harvest will become large woody debris when they fall.*

226 **COMMENT** There should be an assessment of wildlife usage before any snags are removed.

RESPONSE *All timber sale planning will include field inspections by biologists for the purpose of assessing current and future use of the planned sale area by priority species of wildlife, including cavity-users.*

227 **COMMENT** The Neitro, et al, model used to address the affects of wildlife tree retention on wildlife is plagued by a myriad of problems. These problems cause the model to grossly overestimate the number of wildlife trees required to maintain healthy populations of dependent wildlife species. There is no documentation or justification for the even higher levels of wildlife tree retention proposed in the Preferred Alternative.

RESPONSE *Evidence presented by scientists at Oregon State University indicates the opposite; that is, if anything, the model underestimates the amounts of habitat needed by woodpeckers since it is based only on woodpecker nest tree requirements and does not consider woodpecker forage substrate needs. Furthermore, the model does not consider the nest tree needs of several species of secondary cavity users that require tree cavities in early and mid seral stages. For example, snags are needed in new timber harvest areas to provide nest sites for secondary cavity users such as bluebirds, purple martins and other swallows even where surrounding forested areas have enough snags to serve as nest trees for 60 percent of optimum woodpecker populations.*

228 **COMMENT** Identify by alternative how many acres of suitable pileated nesting habitat will be available and its distribution. Do the same for suitable goshawk nesting habitat.

RESPONSE *Available data does not make such information readily predictable. We believe the key question is species viability or persistence which has been addressed in the Supplemental Environmental Impact Statement.*

229 **COMMENT** Use the Neitro et al. model used to estimate current populations of woodpeckers for all seral stages and allocations. Weight the populations so estimated by acres of each seral stage to obtain an overall population level. Display those data.

RESPONSE *The analysis was accomplished in this way. Detailed data are available on request.*

230 **COMMENT** Develop comprehensive prescriptions for managing snags to achieve and maintain the population goal for woodpeckers.

RESPONSE *The focus of the Resource Management Plan is its objectives. Prescriptions must be site specific, varying with existing forest stand conditions, broad ecosystem management objectives and (where appropriate) timber management objectives. They will be developed in site-specific plans.*

231 **COMMENT** Assign population goals for woodpeckers for all land allocations.

RESPONSE *The Proposed Resource Management Plan allocations compartmentalize much of the landscape outside late-successional Reserves into typically small patches of general forest management area and connectivity/diversity blocks separated by linear Riparian Reserves. In such a landscape separable population goals by allocation are meaningless. Over the long term, sizes of snags retained would be suitable for all species although other habitat conditions may influence which species are most abundant. Pileated woodpeckers, for example, are expected to be more abundant in the reserves and northern flickers may be the most abundant woodpecker in the general forest management areas.*

232 **COMMENT** Use the snag recruitment model by Neitro et al. to estimate how quickly green trees retained as future snags will actually become snags. Analyze whether potential snag densities will occur in the next 20 years if natural snag recruitment is insufficient. If it is insufficient, prescribe an active program of snag creation.

RESPONSE *Tree spacings that will result from density management and thinning under the Proposed Resource Management Plan are expected to forestall natural suppression mortality. There will not be natural recruitment of snags in amounts necessary to sustain viable population levels of woodpeckers on lands intensively managed. Snag creation through an active program is therefore vital to the success of the Proposed Resource Management Plan. Snag creation prescriptions will be developed on a site-specific basis. The Klamath Falls Resource Area is managing for a minimum of 60 percent of the optimum for cavity nester populations. The Klamath Falls Resource Area has conducted timber harvest in the past and proposed to continue using mainly a partial cut system. This system leaves many trees that could be available for further wildlife trees. Therefore recruitment over time does not appear to be a problem. Species, such as white fir, shasta fir, and juniper, are often used by woodpeckers and other cavity nesters while the tree is only partially dead or even green. Even though the Neitro model may underestimate requirements we think that management activities provide additional habitat than just the pure snags. In the past few years, harvest units have exceeded the 60 percent goal in snags required.*

233 **COMMENT** Evaluate the resource trade-offs of managing at the 80% population level for woodpeckers, recognizing that the Neitro et al. model likely underestimates woodpecker requirements for snags.

RESPONSE *The actual overall long-term effects of the Proposed Resource Management Plan approximates this level.*

234 **COMMENT** The lands should not be managed so intensely as to have to require artificial snag creation to provide viable populations of snag dependent species.

RESPONSE *Snag creation is planned primarily for future timber harvest areas in second growth stands that may become essentially devoid of snags.*

235 **COMMENT** The BLM does not adequately address the importance of its proposed management activities on neotropical migrants. Consider the July 1992 study on neotropical migrants in Pacific Northwest national forests.

RESPONSE *The habitat requirements of the 165 species of neotropical migrants as a group are so diverse as to preclude analysis of the group as a unit. The BLM is in the process of developing a monitoring strategy to begin to acquire the data necessary to analyze the impacts on each species of neotropical migrant. Currently, impacts of the various alternatives are identified for only a few priority species, some of which are neotropical migrants; for example, osprey, sharp-shinned hawk, Coopers' hawk and purple martin.*

236 **COMMENT** Address how logging practices are affecting the pond turtle.

RESPONSE *A discussion has been added.*

237 **COMMENT** I have reservations about developing Hamaker/Chase Mtn. into winter rec areas which would increase access and activity in a sensitive wildlife area i.e. eagles and deer migratory paths and some winter range—perhaps a road closure similar to Pokegama should be enacted.

RESPONSE *Refer to Chapter 2, Recreation section, of this Proposed Resource Management Plan/ Environmental Impact Statement for the discussion of Hamaker/Chase Mountain area. To summarize, an interdisciplinary activity plan or recreation area management plan "would be developed to identify and resolve specific recreation management issues" following Resource Management Plan completion. Such recreation issues would include the avoidance of sensitive wildlife areas and the need for specific road closures.*

238 **COMMENT** Page 3-46 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. Speaking of early, mid and late seral stage conifer forests...states: "Approximately 165 wildlife species on the west side and 571 species on the east side find their primary habitat within these stages (see Appendix 3-C)." Appendix 3-C lists approximately 217 species, generally found in all habitats on the west side, of which approximately 104 species are generally found in early, mid, and late serial stages, not 165 as stated. Appendix 3-C also lists approximately 270 species in all habitats on the east side, of which approximately 262 species are generally found in early, mid, or late seral stages, not 571 species as stated. As documented in Appendix 3-C, please explain why NO wildlife species of any kind are not generally found in the Mature seral stage?

RESPONSE *The total number of species found in these seral stages has been changed to accurately reflect those listed in the draft Appendix 3-C. The mature seral stage column was a typographical error in the appendix for species on the east side and should have been listed as late/mature seral stage. This is because the seral stage information for the east side of the resource area was taken from Thomas 1979 and is categorized differently than in Brown 1985, which is for the west side. This has been corrected, although the appendix has not been reprinted.*

239 **COMMENT** Table 4-7 shows that 'Special Habitat Feature Buffers' would have a - mod effect; while the statement on page 4-45 shows these buffers would have a positive effect.

RESPONSE *The text was correct and the table has been corrected.*

240 **COMMENT** Greater number of replacement snags should be retained. The Preferred Alternative's proposed 1.9 acres snags per acres on the west side and 1.4 snags per acre on the east side. Based on recent work by Evelyn Bull in the Blue Mountains, BLM is not providing enough snags to sustain cavity nesters.

RESPONSE *The number of snags per acre is based on work by Thomas et al (1979) and Brown (1985) and corresponds to managing for cavity nesters at the 60% level of the optimum population potential. These are the minimum number of actual snags that will be retained. Many timber stands have more snags per acre than the minimum. "Replacement snags", or green tree replacements as we designate them, will be left in much higher numbers and will provide recruitment into a particular stand over the rotation age. It should also be noted that fire histories in the Klamath Falls Resource Area and in the Blue Mountains are very different.*

241 **COMMENT** Despite the statement that: "BLM management would be designed to protect federally listed or proposed threatened and endangered species". The [KFRA draft] Resource Management Plan/ Environmental Impact Statement Preferred Alternative fails to adequately address protection of the only known location of the Townsend's Big Eared Bat, a federal candidate and state sensitive species, whose maternity colony is located in caves above the Klamath River. In fact, the BLM's January 9, 1991 survey of existing conditions with respect to animal populations states: "Habitats that are free of human disturbance are apparently required by this species. Human disturbance of roosting and hibernation sites will likely result in abandonment of these sites. White water rafters on the Upper Klamath River visit the maternity colony site and may eventually cause abandonment of this site..." (p. 34).

RESPONSE *The protection of this species, the site, and the conflict with rafting has been addressed. Under current and proposed management in the Proposed Resource Management Plan, a seasonal closure of the cave and its surrounding environs to foot traffic is in effect. Also see Townsend's big-eared bat in the Special Status Species Habitat section of Chapter 2, which lists protective buffers. The season closure would reduce or eliminate a conflict with rafting.*

242 **COMMENT** Page 2-13, General Fish and Wildlife Habitat [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. This discussion should be expanded to indicate that although the percentage of optimum population potential for cavity nesters in timber harvest units will vary by alternative, an adequate number of snags will be retained to provide for some minimum percentage of optimal population potential. We would suggest that minimum should be 60 percent.

RESPONSE *The cavity dweller objective does change by Alternative and it is 60 percent of the optimum potential on commercial forest land in all alternatives except No Action, A, and B. This section discusses "Common to all alternatives" and gives general guidelines as to how the cavity nester objective will be met. Chapter 2 of the Proposed Resource Management Plan indicates that 60 percent of optimum population is the minimum for timber harvest areas. Areas not allocated to harvest will be managed at the 100 percent level.*

243 **COMMENT** A brief discussion as to how the data collected for reptiles and amphibians will be used should also be included.

RESPONSE *Very little is known about herptiles (reptiles and amphibians) in the Klamath Falls Resource Area. To begin with, baseline data will be collected to document what species are present and describe associated habitat and its condition. This type of information will initially be valuable when planning site specific land use activities such as timber sales.*

244 **COMMENT** Other inaccuracies are contained in Table 3-17 (p.3-43) [of the draft KFRA Resource Management Plan/Environmental Impact Statement] where the primary habitat of reptile and amphibian species does not include categories H (snags) and I (hardwoods). Snags are utilized by a variety of reptile species as refugia, oviposition, foraging and possibly hibernation sites. Numerous reptile and amphibians species utilize habitats dominated by hardwoods, including several of the sensitive and/or Federal candidate species mentioned in the previous list. In particular, California mountain kingsnakes and sharptail snakes are closely associated with areas dominated by hardwoods or a mixture of hardwood and coniferous elements. Nesting and overwintering habitat for western pond turtles (see below for more detail) often occurs in areas dominated by hardwoods. Although a category "k" is listed as primary habitat for reptiles and amphibians, there is no description of this category in the footnotes. It would be useful to rectify this error. The "Population Level/Trend" column notes that the status of reptile and amphibian populations is "unknown". I would differ with this on both general and specific grounds. First, as noted in the Federal Register (Nov. 21, 1992) most of the candidate species are listed as having declining populations. While it might be argued that this is a range-wide rather than an area-specific assessment of their status, it would be worth modifying this table to reflect this general trend and the concern with a number of these species. Second, as you are no doubt aware due to a spate of articles in the popular press as well as a number of publications in the scientific literature, there is widespread concern about the documented decline in many amphibian populations. Some of these species (spotted frog, yellow-legged frog) are known to occur or likely to occur (tailed frog, Cascade frog) in the management area. Third, the status of the western pond turtle is known with some certainty in the management area (see Holland; 1991, 1993), and is in a state of significant decline due to loss of habitat and widespread recruitment decline or failure in many populations.

RESPONSE *The category of snags (h) and hardwoods (i) has been added to reptiles and amphibians. The letter "k" was a typographical error and that category did not exist.*

Listing the population level/trend for reptiles and amphibians as "unknown" is correct for this table. This table includes priority animals species, not special status species. Virtually nothing is known about population level/trend of commonly occurring reptiles and amphibians in the resource area. However, generally speaking, this is not the case for most special status reptiles and amphibians. They have a special status which inherently indicates a downward population trend usually over their range (so this can be considered data applied in general to the resource area).

245 **COMMENT** p.3-23, 1st column, 4th full paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]: This section deals with maintenance of biological diversity. The statement is made that "Maintenance of species diversity implies the maintenance of minimum viable population sizes of each species." While I would not quarrel with the philosophy of maintaining biodiversity and species diversity, some caveats should be noted herein. First, given the general lack of knowledge on the majority of the species that occur in the KFRA (as in many other areas), the determination of "minimum viable population size" is at this point largely a matter of speculation. Some acknowledgment of the uncertainty involved in both the determination of the minimum viable population size and the site-specific and cumulative impacts should be noted in this section.

RESPONSE *This statement is meant to imply that ecosystem management must take all components of the ecosystem into consideration, not just one species at a time. It was not meant to imply that a minimum viable population analysis would be done for all species in all communities. The wording of this sentence has been changed for the Proposed Resource Management Plan to clarify this point.*

Fish

246 **COMMENT** Specify goals and objectives for fish habitat.

RESPONSE *Objectives have been added for the Proposed Resource Management Plan.*

247 **COMMENT** What is termed fish habitat enhancement is actually restoration or rehabilitation.

RESPONSE *It is enhancement of the current condition, but often is also restoration or rehabilitation.*

248 **COMMENT** The BLM proposes a substantial amount of costly stream habitat restoration. Past restoration work in the Northwest has been poorly designed and has done little to reverse declines of many stocks. Future work should be planned on a 3rd-5th order watershed basis, be based on a thorough pretreatment inventory, have clearly defined goals and objectives, and have a short and long-term monitoring plan. It should not be a substitute for protecting fish/fish habitat from the effects of land management activities and should not be conducted in watersheds where watershed processes are not functioning naturally or where the effects of public and private land management activities combined will render restoration ineffective.

RESPONSE *Watershed analysis will precede expensive restoration work. An interdisciplinary team will determine actual management prescriptions to achieve watershed standards based on site-specific requirements. It has been determined, however, that simple protection of existing aquatic habitat is not enough. Much of the aquatic habitat in the Pacific Northwest is in a degraded condition, thus, aggressive restoration efforts are necessary if depressed fish stocks are to be rebuilt.*

The BLM has been in the forefront in developing, monitoring and evaluating habitat restoration projects. These projects have been evaluated not just by the BLM, but in cooperation with Oregon State University and the Oregon Department of Fish and Wildlife. Evaluation has clearly shown that restoration projects can increase the survival of salmonids from eggs to smolts. However, recovery of the stocks depends on overall management of the stream and estuary habitat, and the harvest in the ocean and rivers. The BLM has no control over management of habitat on non-BLM lands, nor over fish harvest management.

249 **COMMENT** The final Resource Management Plan/Environmental Impact Statement should include a comprehensive stream biological survey; identify watersheds supporting productive or valuable remnant populations or communities of native fishes, amphibians and other aquatic biota; and delineate a well-distributed network of least disturbed watersheds.

RESPONSE *We recognize the need for this information; however, it is not available at this time nor can it reasonably be acquired in a timely manner for inclusion in the Proposed Resource Management Plan/Final Environmental Impact Statement. As a part of implementation of the Resource Management Plan, we will move to acquire this data. The BLM has recently released a strategy for the management of anadromous stocks in the Columbia and Snake River Basins which has as a central focus watershed level planning. A similar plan has been developed for the coastal areas of the Pacific Northwest and also includes watershed level planning as a central focus. This plan, which will be published soon, is a road map of how the BLM intends to manage the fisheries of the region to meet the goals and objectives set forth in the Resource Management Plan. Although the Klamath Falls Resource Area does not have anadromous fish species, the concept of using watershed level analysis and planning as a central focus for fisheries management still applies.*

250 **COMMENT** Sensitive and priority aquatic habitat should be identified. Recovery and restoration plans should be developed based on a watershed analysis. In addition, fish habitat and sediment yield should be utilized to establish/predict habitat quality. Summarize subwatersheds where timber harvest emphasis would occur.

RESPONSE *Priority and sensitive habitats are identified in the Forest Ecosystem Management Assessment Team report and have been taken into account when developing the Proposed Resource Management Plan. Also see previous response. Sediment yield is not reliably predictable. Watershed analysis will be accomplished eventually on all watersheds and before management actions in key watersheds. Until that level of analysis is complete, it is not feasible to identify subwatersheds where timber harvest emphasis will occur.*

251 **COMMENT** Consider the information on aquatic resources in the Draft Recovery Plan for the Northern Spotted Owl, the Forest Service's strategy entitled PACFISH, and BLM Washington Office Information Bulletin 92-642.

RESPONSE *We are aware of this information and have considered it.*

252 **COMMENT** Identify and discuss the status of various wild fish stocks and habitat conditions within whole watersheds, not just BLM-administered portions. What is the relationship between habitat conditions and the severely depressed status of many stocks?

RESPONSE *We actively seek to cooperate with other landowners in developing and implementing plans for management of aquatic habitat. We are cooperating fully with the Oregon Department of Fish and Wildlife efforts to identify and protect genetically unique fish stocks, and with management proposals to protect and enhance salmon and trout communities. However, BLM does not have any control over management of habitat on private lands, which is a State responsibility. While we acknowledge that activities on private and State lands may affect habitat on BLM-administered lands, we recognize that private and State lands are managed under State regulations. We have taken these differences into account during impact analysis.*

Habitat condition undeniably plays a role in the depressed status of many stocks; however, many factors other than habitat condition affect fish production (such as harvest, etc.). These factors are not under the control of the BLM.

253 **COMMENT** Analysis of impacts on fish is flawed because it fails to consider management activities on private lands, assumes that past damage will improve on its own, and ignores effects from continued timber harvest in upland areas.

RESPONSE *The Klamath Falls Resource Area based the impacts on fisheries on existing stream condition, trend, and potential impacts to stream condition. The Klamath Falls Resource Area will be managing streams on proper functioning condition. This analysis takes into account the impacts being caused by off-site activities and the stream's ability to handle these impacts. The proposed Riparian Reserves and adoption of the Aquatic Conservation Strategy will minimize impacts from the upslope management activities on BLM-administered lands.*

254 **COMMENT** Effects on fish should be measured against a desired future condition, not against current conditions.

RESPONSE *An environmental impact statement normally addresses the changes that alternative courses of action would cause from the present condition. Desired future condition or resource condition objectives, in the planning process, are developed for a specific alternative. They would differ for each* *alternative. The objectives provide the standards for monitoring the effects of the implementation of the plan, while the current conditions establish the baseline against which the effects on fish by the various alternatives can be measured. Although the Forest Ecosystem Management Assessment Team made regional comparisons of some of their alternatives against independently derived possible target conditions, those subjective ratings could not be replicated by BLM personnel on a single district basis.*

255 **COMMENT** Use of the average diameter of trees to predict fish habitat trends is too simplified. Much more detailed information on stream variables related to fish survival is needed, such as substrate imbeddedness, stream temperature, presence of deep pools, dissolved oxygen, sedimentation, etc.

RESPONSE *All of these factors were considered when the Klamath Falls Resource Area biologists made their professional determinations. The BLM biologists also consulted with the Oregon Department of Fish and Wildlife on their ratings of fisheries streams.*

256 **COMMENT** There is no discussion of the very real possibility of loss of viability of some aquatic species, particularly anadromous fish stocks of concern. Consider the recent finding by Oregon Department of Fish and Wildlife that their index of coastal abundance greatly overestimated escapement and the status of wild coho stocks may be bleaker than once thought.

RESPONSE *We are aware of these findings. The Supplemental Environmental Impact Statement addressed viability of aquatic species. Although the Klamath Falls Resource Area does not manage anadromous species, we are cooperating fully with the Oregon Department of Fish and Wildlife efforts to identify and protect genetically unique fish stocks, and with management proposals to protect and enhance trout communities. The riparian and stream management in the Proposed Resource Management Plan will be adequate to protect existing habitat and to promote long-term recovery of diminished habitat on BLM-administered lands. However, the fate of many fish stocks will be influenced more by activities on other land ownerships and by regulation of fishing. Funding priority for rehabilitation and restoration efforts will reflect stock status.*

257 **COMMENT** Identify how closely the expected condition of the fishery resource will approach maximum potential.

RESPONSE *It is not possible to determine what the maximum potential is and the BLM does not control all factors affecting fish production.*

Special Status Species

258 **COMMENT** Note the current status of species-specific management plans. Clarify whether site-specific management plans will be develop for the bald eagle and peregrine falcon, and when.

RESPONSE *Site specific management plans termed Conservation Agreements are being developed for Special Status Plants. These are interagency plans developed between BLM, U.S. Forest Service and U.S. Fish and Wildlife Service, which identify and schedule specific management actions to prevent listing and to conserve these species. Several plans are scheduled for 1994 and 1995. For animal species such as the bald eagle and peregrine falcon, the objectives of recovery plans will be the basis of BLM management. Plans will be developed and maintained using information from applicable watershed analyses.*

259 **COMMENT** Indicate what measures (inventories, buffers, site-specific management plans, consultation with the Fish & Wildlife Service, etc.) will be implemented to assure that actions such as timber harvest, road construction, grazing, and recreational use and development do not adversely affect listed species.

RESPONSE *Federally listed species and/or their habitat will be managed in compliance with the Endangered Species Act and BLM national and State Office policy, which will include conferencing and consultation with the U.S. Fish and Wildlife Service. For species with completed recovery plans, management activities will be consistent with the plans' objectives. Inventories and identification of buffers, seasonal restriction, and other project modifications are part of the process to ensure that actions are in compliance.*

260 **COMMENT** Identify the species expected to benefit from the old growth emphasis areas and how the old growth emphasis areas will contribute to habitat, forestalling listing, and/or delisting of each species.

RESPONSE *Reserves were not specifically intended to benefit special status plants. All special status plants, except for Assessment Species, will be managed in a way that will not contribute to the need to list, regardless of land allocation.*

In general, animal species that will benefit from the Late-Successional Reserves are those whose daily and annual life cycle needs require habitat components provided in late-successional conifer forests. Those species were identified in Appendix 3-C of the draft plan. Some of these are currently federal-listed species, some are candidates for listing and others are not now, nor will they probably ever be in need of listing protection, but all benefit from the habitat conditions inherent in the Reserves. For example, the Reserves follow the intent of the Designated Conservation Areas of the Final Draft Northern Spotted Owl Recovery Plan. This plan and its components are designed to recover the spotted owl populations, but also provide habitat for a host of other species where their occurrence is in common. The Late-successional Reserves are large tracts that will eventually have significant acreages of older forest. Species such as the marbled murrelet, goshawk, bald eagle (where the Reserves are near water bodies) salmonid fishes and numerous species of small mammals, birds and amphibians will be able to sustain populations in these areas. A given Reserve may contain several populations of a given salamander species while for more far-ranging species such as the goshawk and spotted owl it may require multiple Reserves to serve the needs of a population. Key items in the Fish and Wildlife Service's review of the whether a species should be listed or delisted are whether the habitat of the species is being lost and whether there are regulatory mechanisms in place to protect the species. The Reserves serve as cornerstones for meeting both of these items of concern and thus should weigh heavily in the listing/delisting considerations. The viability ratings in the Supplemental Environmental Impact Statement also provide an indirect identification of species expected to benefit.

261 **COMMENT** The federal status of several species is incorrectly noted.

RESPONSE *The special status species list has been corrected and updated.*

262 **COMMENT** Consultation under the Endangered Species Act regarding effects of activities on mining claims on federally listed threatened and endangered species is the responsibility of the BLM.

RESPONSE *Consultation with the US Fish and Wildlife Service for mining is the responsibility of the claimant if there is a notice of intent in place. It is the BLM's responsibility if there is a plan of operation filed. However, we would certainly be in contact with the US Fish and Wildlife Service in both cases, regardless of responsibility for consultation.*

263 **COMMENT** A minimum viable population of a species is on the brink of catastrophe. Managing special status species for populations above the minimum is recommended.

RESPONSE *Our goal is to manage for healthy populations of all fauna and flora, including special status species, by employing policies, land use allocations, and management direction that will ensure stable populations.*

264 **COMMENT** Inventory sensitive wildlife species.

RESPONSE *Inventories are an ongoing process but are not a standard decision element of an Resource Management Plan. Wildlife inventories are very expensive and thus subject to budget constraints.*

265 **COMMENT** The DEIS violated the National Environmental Policy Act by failing to adequately analyze the effects of the Resource Management Plan on marbled murrelets, songbirds, declining amphibians, western pond turtles, many important species of plants sensitive to disturbance and candidates for the endangered species list.

RESPONSE *In the Resource Management Plan/Environmental Impact Statement, those effects are analyzed at a level of detail consistent with what is known about the habitat needs of the many species at issue. They are also analyzed in the Supplemental Environmental Impact Statement. Monitoring is a critical component of the Resource Management Plan and will increase our knowledge of habitat needs. This information will be used to adjust management strategies whenever necessary in order to ensure that management objectives are achieved.*

266 **COMMENT** Provide clear direction for site-specific protection of other Oregon sensitive (wildlife) species. The Preferred Alternative should contain allocations and management standards for bald eagles, peregrine falcons, wild turkeys, Townsend's big-eared bats, great blue herons, and band-tailed pigeon mineral springs. It should also commit to develop site specific habitat management plans for each known site and other sites as they are found.

RESPONSE *The Proposed Resource Management Plan contains management direction for various wildlife species. In many cases, allocations such as reserves and special management areas will provide habitat for wildlife species. The concept of ecosystem management is to provide habitat sufficient to meet the needs of all wildlife species rather than to provide species-by-species allocations. Chapter 4 provides species by species discussions of how the allocations will serve the species. Where the Resource Management Plan allocations and prescriptions are not sufficiently detailed to guide management of these species, a habitat management plan will be prepared.*

267 **COMMENT** Take a more active role in improving habitat for sensitive fish species and stocks. Describe more completely how the preferred alternative will affect sensitive fish stocks and how adverse impacts would be mitigated.

RESPONSE *The BLM does not manage species or communities; we do manage the habitat on which these species depend. We are cooperating with the Oregon Department of Fish and Wildlife efforts to identify and protect genetically unique fish stocks, and with management proposals to protect and enhance salmon and trout communities. Habitat restoration is an important component of the Proposed Resource Management Plan.*

268 **COMMENT** Identify all existing sites for listed and candidate plant species. Work with other state and federal agencies to prioritize their study and monitoring.

RESPONSE *All existing known sites for listed and candidate species are mapped on our geographic information system. As new sites are discovered through inventory they will be added to the geographic information system. Inventory will continue throughout the life of the plan. Extensive coordination already occurs with state and federal agencies and private organizations. Memoranda of Understanding and/or Cooperative Agreements have been developed with the Oregon Department of Agriculture, the Oregon Natural Heritage Program, The Nature Conservancy, and the Center for Plant Conservation.*

In addition to memorandums of understanding and cooperative agreements, interagency management plans called conservation agreements are being developed between all federal landowners throughout a species range. Cost share agreements are in place for studying and monitoring many listed and federal candidate plant species.

269 **COMMENT** Discuss the effects of management alternatives on special status plant species similarly to the discussion of effects on special status animal species. Bureau sensitive plant species get too little attention. Use the Oregon Natural Heritage Program list for identifying habitats of plant species that could become threatened or endangered.

RESPONSE *Special status plants are not discussed individually because of the large number of special status plants and the limited amount of information available on their biology. More research is needed before more can be said. The Oregon Natural Heritage Program list provides only species names and status and can not be used to identify habitats. Location information for the District which is stored in the Oregon Natural Heritage Program Element Occurrence Database was provided for the most part by BLM personnel. Location information is exchanged between the Oregon Natural Heritage Program and the BLM on an annual basis under a Memorandum of Understanding and Cooperative Agreement.*

270 **COMMENT** All plant species on the Oregon Natural Heritage Program sensitive list should be considered in the Resource Management Plan/Environmental Impact Statement. Standards addressing the protection of Oregon Natural Heritage Program sensitive species and their habitats should be included in all land use allocations. The orientation of management for sensitive species should shift from individual species and habitats to ecosystems.

RESPONSE *Plant species occurring on BLM-administered land which are identified as threatened or endangered on the Oregon Natural Heritage Program's sensitive lists are addressed in the Proposed Resource Management Plan. Species on the Oregon Natural Heritage Program's four sensitive lists have widely varying needs for management. The BLM Oregon State Office special status species policy includes all plant species in the Oregon Natural Heritage Program lists, according different levels of attention based on the species' sensitivity. Plant species on BLM-administered land which are threatened or endangered throughout their range (Oregon Natural Heritage Program List 1) are federal candidate or Bureau sensitive species; those threatened or endangered in Oregon but more stable or abundant elsewhere (List 2) are BLM Oregon/Washington assessment species and are addressed in the Resource Management Plan. Plant species on List 3 ("review") and on List 4 ("watch") are BLM Oregon/Washington tracking species. They are identified by Oregon Natural Heritage Program as species needing more information (List 3) and as being of concern but not presently threatened or endangered (List 4). When funding permits, we would collect information on tracking species but special management is not planned.*

The Proposed Resource Management Plan provides management direction for those species considered in jeopardy of extinction and in need of special management attention. This includes federal listed, federal proposed, federal candidate, state listed, and Bureau Sensitive species. These species were identified from U.S. Fish and Wildlife Service lists of federal listed, proposed, and candidate species, State of Oregon lists of state listed and candidate species and Oregon Natural Heritage Program lists. Management strategies for special status plants do not vary with land use allocation in the Proposed Resource Management Plan. The Proposed Resource Management Plan will provide for ecosystem management to protect special status species.

271 **COMMENT** To follow state and federal guidelines, rare plant habitats should be "protected" rather than "managed".

RESPONSE *Proposed management prescriptions are in full compliance with all State and Federal guidelines. "Protection" alone will not be sufficient for maintaining many plant species. Active management such as prescribed fire may be necessary to maintain or restore the structure and function of certain plant habitats.*

272 **COMMENT** The Preferred Alternatives in the Final Plans should contain a standard set of land allocations and management standards for each of these (Special Status) species. These standards should be developed using the expertise of species specialists. Standards should specify where vegetative manipulation is an option.

RESPONSE *We have taken the approach of ecosystem management, rather than single species management. Habitats will be managed so as to produce a variety of seral stages and habitat components that meet the needs of all species. Thus, specific objectives for individual species are not identified. However, the Proposed Resource Management Plan has identified land-use allocations and/or management direction for some species or species groups when scientific knowledge permits identification of appropriate standards to supplement ecosystem management. Many of those standards were developed for the Supplemental Environmental Impact Statement and included in its Record of Decision.*

273 **COMMENT** Clearly define the scope and criteria used for site-specific protection of species that may be threatened or jeopardized by timber harvesting activities within all the land use allocation categories.

RESPONSE *Management direction for the Proposed Resource Management Plan has been expanded to address this.*

274 **COMMENT** Your management regime for spotted owls should be designed to meet at least minimum provisions of the US Fish and Wildlife Service recovery plans.

RESPONSE *The Proposed Resource Management Plan is designed as a BLM implementation of the Final Draft Recovery Plan for the northern spotted owl. It varies from an exact interpretation of the Final Draft Recovery Plan due to the consideration of other resources.*

275 **COMMENT** On page 4-56 [of the draft KFRA Resource Management Plan/Environmental Impact Statement], under the subsection on Effects on Special Status Species, the document states that there have been no comprehensive inventories of special status plant species. How can the BLM carry out its legal mandate to protect endangered species when the agency doesn't know which plant species are found within the Resource Management Area? Do any of the alternatives contain a plan for future inventories.

RESPONSE *No plant species are listed as threatened or endangered within the Klamath Falls Resource Area.* Astragulus applegatei *has been formally proposed for listing, but no known populations of this species occur on BLM-administered lands. Populations of other special status plant species have been identified through botanical clearance surveys for specific management actions. These data are on file in the resource area office and have been submitted to the Oregon Natural Heritage Program. Under the Proposed Resource Management Plan general inventories would be conducted for special status species where needed to determine species distribution and status.*

276 **COMMENT** Page 3-103. The [KFRA draft] Resource Management Plan states that 15 management categories in conflict with existing grazing practices have been identified for the Klamath Falls Resource Area, yet only nine are listed. The remaining 6 should be listed and should include threatened and endangered (T&E) Species Management. The Resource Management Plan should demonstrate an awareness of the potential impacts to T&E Species by grazing management practices.

RESPONSE *Refer to Appendix L for all of the management categories that have some level of conflict with existing grazing practices. Included in many priority allotments (for example, Edge Creek [0102] and Horsefly [0882]) is the identified conflict/concern of "Special status species and/or habitat exists within the allotment", which is indicative of our awareness of the threatened and endangered species concerns.*

277 **COMMENT** Page 3-104, Map 3-17 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The grazing allotments in the Gerber Block represent a significant BLM ownership, and therefore management control, over a large percentage of a drainage basin. This provides an excellent opportunity to meet BLM's duties under the Act to conserve listed species by allowing management changes to have effects to most of a large drainage important to listed species.

RESPONSE *As represented by our recent formal consultation with the US Fish and Wildlife Service on the shortnose sucker, the BLM intends to completely fulfill all of its obligations, throughout the KFRA, as required by the Endangered Species Act. We believe we can meet this obligation as well as provide for multiple other uses within the Gerber Block, because of the fact we have management control over the vast majority of this area. Significant management changes have been made to the grazing practices in the Gerber block in recent years, and more will be implemented in the future, as needed to correct remaining problems.*

278 **COMMENT** Page 3-49 Special Status Species Habitats, Plants [of the draft KFRA Resource Management Plan/Environmental Impact Statement]: Statement that there are no proposed federally listed species needs to be corrected. *Astragalus applegatei* was proposed on November 26, 1991. Page 3-50 Table 3-19. The table should be corrected to reflect the correct federal status of *Astragalus applegatei.*

RESPONSE *The necessary corrections concerning the status of* Astragulus applegatei *have been made.* Astragulus applegatei *is now listed as endangered under the Endangered Species Act.*

279 **COMMENT** Page 4-58, Effects on Special Status Species [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. Effects to species such as spotted frog, northern goshawk, Pacific fisher, and *Astragalus applegatei*, should be reevaluated based upon the corrections in federal status noted above. Statements regarding effects to federally listed, proposed, candidate, and assessment species should be rechecked based upon correct species status.

RESPONSE *Changes have been made to reflect the correct federal status of those special status species that were either listed incorrectly or not listed. As stated in the opening paragraphs of Chapter 3, Special Status Species, Animals, only those animals for which presence is documented and at least some information about where they occur and habitats they occur in on the resource area are included in the write ups in Chapter 3 and 4.*

280 **COMMENT** Miller Creek: Appendix 2-55 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. - The creek provides habitat for shortnose sucker and Lost River suckers. The Bureau of Reclamation and US Fish and Wildlife have not captured any Lost River suckers in Gerber Res. or in Lost River from Harpold Dam to Malone Res. in Lost River. The US Fish and Wildlife fish biologist in Sacramento claims suckers need 6 foot of water to survive in this area. Miller Creek does not have this kind of depth when irrigation releases are not being made. These two suckers are mentioned on

2-57 also. I recommend No Action on Miller Creek. 2-58 I think enhancing sucker habitat would require developing deeper water in some areas. This would be very hard to do mechanically and impossible to get a Core of Engineers permit.

RESPONSE *Any mention of the Lost River sucker in Miller Creek states that it is potential habitat for this species and does not imply that it is present in the stream.*

281 **COMMENT** The [KFRA] draft states that bald eagles may be negatively affected by road management, recreation development, and off-road vehicles and that peregrine falcons may be negatively affected by road management, recreation development, mineral exploration and development, and off-road vehicles. The Service also perceives that timber harvest activities, grazing allotments, and increased recreation pressure and/or development have the potential to adversely affect listed and proposed species. The biological assessment should indicate what measures, i.e. conduct inventories, development of buffers or site-specific management plans, consultation with the Service, etc. will be implemented to assure that these actions would not adversely affect listed species.

RESPONSE *The biological assessment will address the specific measures that will be implemented for special status species.*

282 **COMMENT** The discussion of the distribution of the Lost River and shortnose suckers is out of date. The Final Resource Management Plan should reflect the current distribution of these species, and should include a thorough reanalysis of the effects of Preferred Alternative Management guidelines on these species in all the areas.

RESPONSE *New information on distribution has been reported since the draft Resource Management Plan/Environmental Impact Statement was sent to press. The most current distribution and other new pertinent information is included in the final Resource Management Plan.*

283 **COMMENT** Statements throughout the draft [KFRA] Resource Management Plan suggest that the PA will provide positive effects to the listed suckers, while in fact they would not. This appears to be based on comparison with the current grazing levels. While it is true that a reduction in AUM's might very likely reduce grazing caused impacts to listed fishes (via riparian and water quality impacts), the PA level of grazing pressure still represents a negative impact to these species. The Resource Management Plan should compare the effects of grazing on listed suckers to the absence of grazing, not current management.

RESPONSE *The analysis of effects in the draft Resource Management Plan/Environmental Impact Statement was designed to measure changes that would occur under each alternative when compared to the existing situation. The No Action Alternative as reflected in the draft Resource Management Plan is a continuation of the existing situation, where grazing is already occurring. The No Action Alternative as defined by the Council of Environmental Quality in their Forty Most Asked Questions Concerning Council of Environmental Quality's National Environmental Policy Act Regulations (40 Code of Federal Regulation 1500-1508) as printed in the Federal Register Vol. 46, No. 55, 18026-18038, 3/23/81 requires this analysis.*

284 **COMMENT** The discussion of riparian areas and the effect of their conditions on fishes in the Resource Management Plan is limited, by and large, to the effects on gamefishes. While these fishes may be of concern to the general fishing public, the BLM has responsibility under the Endangered Species Act to the listed fishes that are found both on BLM lands and in stream systems downstream of these lands that are potentially affected by the management programs on BLM land. In some cases, managing for non-native gamefishes (such as bass, catfish, and brown trout) may be in direct conflict with providing suitable habitats to the listed suckers. The Resource Management Plan should discuss the degree to which fisheries management effort will be aimed at the listed fishes as opposed to gamefishes and resolve any conflicts between gamefish management and listed species.

RESPONSE *Before undertaking any type of management action that could potential affect listed species, the BLM would address the issue in a site-specific environmental analysis document and this process would include informal or formal consultation with the U.S. Fish and Wildlife Service. The Resource Management Plan has not discussed conflicts that could arise between management of game fish and listed fish for two reasons: one is the document is based on a broad management scale and cannot always provide specific situations and corresponding potential conflicts, and how those conflicts would be resolved. This sort of detail would be addressed in activity level planning (or a related biological assessment), would include consultation with the U.S. Fish and Wildlife Service, and conflicts would be resolved after all have been identified. The second reason is that for most listed and candidate fish species, except redband trout, very little is know about habitat requirements, population dynamics and numbers, distribution, and other life history information for those residing in waters within the resource area. The BLM is currently cooperating with researchers and other government agencies to gather this type of data so that measures may be taken to insure conflicts would be adequately addressed.*

285 **COMMENT** Page 3-102. Livestock Grazing [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. In the discussion of current grazing management in the Gerber Block, the Resource Management Plan states that "[s]hort-duration, high intensity grazing systems specifically designed to improve riparian and wetland resources have been implemented to varying degrees on the I allotments". The Resource Management Plan should explain why these types of management plans have been implemented on I allotments in the Gerber Block alone, and not throughout the Klamath Falls Resource Area where there are I allotments. Similar programs should be implemented with the known distribution of listed suckers in mind.

RESPONSE *The passage quoted from on page 3-102 of the draft is located in Chapter 3, Affected Environment. This chapter outlines what exists at present and not what we intend to do in the future, which is to implement appropriate management strategies on all allotments. The Gerber area has been addressed first because this area contains over half of the "I" allotments (8 of 14) and 80 percent of the "I" allotment acreage. During the allotment monitoring evaluation and/or activity planning processes, current management will be affirmed where it is at or moving reasonably towards resource objects, or new management strategies will be implemented where objectives are not being accomplished. Refer to the response to comment number 277.*

286 **COMMENT** P.2-12, 2nd column, 1st full paragraph; p.2-13, 2nd column, 1st full paragraph; p.2-13, 2nd column, 4th full paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. This section deals with the need for inventories and inventories and surveys of sensitive species. I agree that general and site-specific surveys are needed, however my previous comments concerning the accuracy (more effectively inaccuracy) of the existing information on reptiles and amphibians emphasize the need to consult with professional herpetologists familiar with the area prior to the time this effort takes place to maximize effective use of time and effort. One statement in particular is rather puzzling; that "A general inventory of reptiles and amphibians would be conducted in portions of the planning area where they are suspected to occur." Given that it is likely there are relatively few areas in the planning area that do not hold reptiles or amphibians, it might be appropriate to modify this statement.

RESPONSE *This statement has been modified to clarify the meaning.*

287 **COMMENT** p.2-25, 1st column, 2nd full paragraph; 2nd column, 1st paragraph [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. This section deals with the effects of livestock grazing in the Klamath River canyon allotment areas. As I read it from the information in Vol. 2 of the Resource Management Plan, these include the Chase Mountain allotment (#101-8823 acres), the Chicken Hills allotment (#141-3422 acres) and the Plum Hills allotment (#813-160 acres). If I am interpreting the information in Appendix 2 correctly, the proposed range improvements to #101 and #140 include reservoirs. In Table 2-1 the listed number of reservoirs for the entire KFRMA varies from a high of 55 (Alternative A) to a low of 44 (Alternative E). These many pose problems for WPTs and other native species due to the potential for establishment and further spread of exotic species in the area near the reservoir. In particular, bullfrogs require permanent water sources to become established in an area, and are frequently found in reservoirs maintained for livestock. This facilitates movement into and establishment in watercourses in which they otherwise might not occur or be able to persist. The presence of reservoirs encourages and facilitates the establishment of exotic warm-water fishes which have negative effects not only on WPTs but also native fishes, frogs and other wildlife. I note that there are no identified resources/conflicts in the specified allotments. I would suggest that such conflicts might include direct and indirect impacts to riparian areas through grazing, and concomitant impacts on a variety of candidate taxa, including the western pond turtle and the foothill yellow-legged frog. This potential conflict is not necessarily restricted to these particular allotments; rather they contain the greatest amount of habitat likely to hold both the species noted and a variety of other sensitive taxa. Furthermore, the use of the term "spring development" needs to be defined and clarified. In Table 2-1 the number of springs listed for development in 9 across all alternatives. Seeps and springs form important microhabitats for many species of amphibians and invertebrates, and "improvements" via construction of retaining walls to form ponded habitats, or construction of cisterns may in fact significantly alter the suitability of these sites for a number of species. In the same light, it is important to specify by site what the proposed "vegetation manipulation" would entail. This presumably involves manipulation of community structure to maximize forage species biomass for livestock but needs to be discussed in some detail.

RESPONSE *All of the rangeland improvements proposed in the Proposed Resource Management Plan/ Environmental Impact Statement will require site-specific environmental analysis completed prior to project construction. The environmental analysis process will analyze the impacts of the project to all potentially affected resources. In addition, the term "spring development" can refer to a variety of improvements that have in common, that they take place at spring sources, and they are designed to improve the quality and/or quantity of available water. The specific details of any spring development would be unique to the particular project and would be explained as part of the environmental analysis process.*

Spotted Owl

288 **COMMENT** There is no scientific evidence that the forest structure needed as spotted owl habitat can be grown over time using long rotation forestry.

RESPONSE *Although the evidence may not be complete, there is promise that long rotation forestry may produce suitable spotted owl habitat. For that reason the BLM has initiated research to aid future forest managers who will deal with the issue in the next century. The BLM will maintain all suitable habitat in Late-Successional Reserves and foster old growth forest conditions in the current young forests in the Late-Successional Reserves as they mature.*

289 **COMMENT** Address management direction for timber sale areas exempted by the Endangered Species Committee in 1992.

RESPONSE *The BLM will not pursue the harvest of any of the previously planned timber sales exempted by the Endangered Species Committee. Harvest may occur at a future time on the same land acres, but the prescriptions will not jeopardize the continued existence of the spotted owl or any other federal-listed species.*

290 **COMMENT** Identify the standards under which known spotted owl nest sites will be protected.

RESPONSE *At a minimum, at least one center of activity at all known sites of resident single and territorial pairs of northern spotted owls known as of January 1, 1994, will have up to 100 acres of the* *best available surrounding habitat excluded from timber harvest. Obviously, sites that fall within Reserves or Special Management Areas would have more acres protected surrounding the site.*

291 **COMMENT** Clarify whether surface occupancy for mining activities will be allowed in northern spotted owl sites.

RESPONSE *As a general rule disturbances, such as surface occupancy, would not be authorized within 0.25 miles of a northern spotted owl site. This will however vary by site and by season of the year so it is not an absolute exclusion. In instances where the mining activities can occur in harmony with the owl occupancy of the site, efforts will be made to accommodate the mineral resource use.*

292 **COMMENT** The BLM proposed inappropriately to provide connectivity for spotted owls by managing connectivity areas.

RESPONSE *The purpose of connectivity/diversity blocks is to serve a variety of wildlife species, not just spotted owls. Connectivity/diversity blocks, along with other allocations such as riparian reserves and Special Management Areas, are expected to mix with the General Forest Management Areas to provide for dispersal of many species including spotted owls.*

293 **COMMENT** Explain how the connectivity areas compare to the 50-11-40 rule outlined in the Interagency Scientific Committee report.

RESPONSE *Management of BLM-administered lands within a quarter township in a connectivity-diversity block will meet or exceed 50-11-40. In the short term there will be quarter townships where this is not true but in these areas conditions will not decline and recovery will occur in future decades.*

294 **COMMENT** The adequacy of connectivity areas for spotted owl dispersal should be demonstrated.

RESPONSE *That can only be demonstrated through monitoring. Given other requirements of the plan, it may be impossible to isolate the effects of connectivity/diversity blocks.*

295 **COMMENT** Several activities are proposed in deferred old growth emphasis areas that appear inconsistent with the draft spotted owl recovery plan. These include density management in older second growth and large scale salvage.

RESPONSE *Old growth emphasis areas have been dropped from the Proposed Resource Management Plan. Activities in Late-Successional Reserves must be beneficial to the spotted owl and pass review under the auspices of the Regional Ecosystem Office.*

296 **COMMENT** The potential synergistic effects of low habitat, low population and reduced dispersal, on the survival of the spotted owl should be addressed.

RESPONSE *A discussion of this subject has been added to Chapter 4.*

297 **COMMENT** Assess the viability of the spotted owl under the Preferred Alternative, in the short term, at the lowest point in habitat development, and in long term.

RESPONSE *An assessment of the viability of the spotted owl included in the Supplemental Environmental Impact Statement, is discussed in Chapter 4 of the Proposed Resource Management Plan/Final Environmental Impact Statement.*

298 **COMMENT** Evaluate the effects of the plan on designated critical habitat.

RESPONSE *An assessment of the effects of the plan on designated Critical Habitat has been added to the analysis of effects. No actions will be implemented that will result in the destruction or adverse modification of Critical Habitat.*

299 **COMMENT** The discussion of the discrepancy between the spotted owl population model's projection of current population and the observed population should include problems with the model.

RESPONSE *Since Supplemental Environmental Impact Statement Appendix J superseded our analysis, we have not rerun the McKelvey model for analysis of the Proposed Resource Management Plan, except to acknowledge and reference the Supplemental Environmental Impact Statement analysis.*

300 **COMMENT** Assess the risk that density management would negatively affect suitable spotted owl habitat.

RESPONSE *There is no density management proposed in suitable owl habitat in the Reserves or in occupied residual habitat areas in the matrix. Otherwise, owl habitat in the matrix is available for management and loss of habitat over time in the matrix is acknowledged.*

301 **COMMENT** Evaluate the level of risk to the stability of spotted owl populations under the Preferred Alternative.

RESPONSE *The Chapter 4 discussion has been expanded to describe risk in general terms. The Supplemental Environmental Impact Statement evaluates risk from the (new) Proposed Resource Management Plan as it integrates with other Federal plans.*

302 **COMMENT** Provide information on the quality and distribution of suitable spotted owl habitat after 100 years. Identify the extent to which the development of future habitat is dependent on the ability to create or speed its development through silvicultural practices.

RESPONSE *Information on the acreage of suitable habitat expected on BLM-administered lands after 100 years is provided in tabular form in Chapter 4. The development of quality habitat is dependent on time. The younger stands of today that hold the key to habitat recovery will be 100 to 140 years of age in 100 years. In this age range, stands are beginning to move from primarily foraging substrate to furnishing high quality foraging and nesting habitat. The role of density management is to diversify the stands structurally so that they might attain the higher quality status at approximately 120 years of age. The silvicultural practices serve as an enhancement technique that, if it is successful, will bring habitat on line faster. If it is not successful, however, stand development could be retarded and the time till habitat conditions were reached could be lengthened. Many of the answers to questions on this topic are unknown at this time, but the objective is to apply the management prescriptions over time within an adaptive management framework.*

303 **COMMENT** Discuss the capability of old growth emphasis areas, and the management proposed within them, to maintain population levels sufficient to provide internal stability within them.

RESPONSE *This capability, in relation to Late-Successional Reserves, has been fully addressed in the Supplemental Environmental Impact Statement.*

304 **COMMENT** Given the lack of experience in developing and maintaining old growth characteristics capable of supporting viable populations of spotted owls and the lack of detailed knowledge on the components of structurally diverse forest important to spotted owls, the prediction that as much as 40 percent of the old growth emphasis areas may be subject to density management increases the risk of catastrophic failure of the network concept. Evaluate the risk of failure of the techniques and the potential impact on the species of such a failure.

RESPONSE *The Chapter 4 discussion has been expanded to address this concern as it now relates to late-successional reserves, and it is addressed in the Supplemental Environmental Impact Statement. In the Klamath Falls Resource Area all known owl sites occur in areas that have received some form of past logging activity. The BLM is continuing its efforts to recruit new birds to these areas to replace birds at existing sites or to establish new areas. By learning from past logging practices that produced desirable results, we think we can conduct density management and be successful. The Late-Successional/ District Designated Reserve buffers will provide areas to test these procedures.*

305 **COMMENT** Indicate how spotted owl dispersal will be maintained.

RESPONSE *Dispersal habitat for owls will be provided by the vegetation pattern and condition inherent in the management allocations and prescriptions of the Late-successional Reserves, Riparian Reserves, Special Management Areas, connectivity/diversity blocks, and the General Forest Management Areas.*

306 **COMMENT** Provide rationale or documentation for the statement that isolation is not thought to be a factor under the Preferred Alternative.

RESPONSE *The issue of isolation of segments of the population was addressed in the Final Draft Recovery Plan for the Northern Spotted Owl and was accounted for by the size and arrangement of Designated Conservation Areas and the management of the matrix between them. The Proposed Resource Management Plan adopted the reserve system identified in Alternative 9 of the Supplemental Environmental Impact Statement and will manage the intervening Special Management Areas, connectivity/diversity blocks and General Forest Management Area lands to ensure adequate survival and movement of young owls.*

307 **COMMENT** Discuss the impact of the Preferred Alternative on all quarter townships, not just those in connectivity areas. Evaluate how the deficient (regarding the 50-11-40 rule) quarter townships are distributed and how their location affects inter- and intra-provincial dispersal.

RESPONSE *The discussion of dispersal habitat under the Proposed Resource Management Plan addresses dispersal on lands outside the (late-successional) reserve system.*

308 **COMMENT** While the long-term conditions are of interest, the short-term impacts and an evaluation of conditions at the "lowest" point are critical to assessing the impacts to the species. This section should include a discussion of short-term and medium-term effects, and the lowest point.

RESPONSE *The discussion has been expanded.*

309 **COMMENT** Though it has been said that owls nest only in old growth, they are now finding owls nesting in younger trees as well.

RESPONSE *Spotted owls have been found to nest in younger forests with significant older forest structural characteristics. Recent regeneration harvests, especially clear cuts, have not retained these structures, including large retention trees, numerous snags, and large amounts of down woody debris.*

310 **COMMENT** As time goes by, the numbers of known owls or pairs of owls keep rising and as of now the number of owls known to exist far exceed the numbers that were estimated to be in the past.

RESPONSE *It is true that the known number of spotted owls has increased in recent years. This is primarily due to the much increased intensity of survey efforts during the breeding season. The apparent increase in population size does not contradict the projected decline of the species range-wide. Neither does the number of known exceed estimates from Thomas, et al (1990) or the Final Draft Recovery Plan.*

311 **COMMENT** Due to the controversy surrounding the type of science being employed, the BLM's documentation must disclose not only the assumptions used in estimating land management impacts on the species, but the associated level of confidence as well.

RESPONSE *Some of the documentation was listed in Appendix 4-E of the draft Resource Management Plan/Environmental Impact Statement. Additional documentation has been provided in the Supplemental Environmental Impact Statement.*

312 **COMMENT** Provide an indication of how the Residual Habitat Areas will be placed on the landscape and the reason they are only provided for 8 decades.

RESPONSE *Although no longer called Residual Habitat Areas, they are allocated as 100 acres of the best suitable habitat around all site centers (as of 1/194) that fall within the Matrix. The 8-decade deferral is no longer proposed; they are now reserves.*

313 **COMMENT** N.A. Alternative, page S-2 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. "No special actions would be implemented to protect old growth ecosystems. Measures implemented to protect habitats of threatened and endangered species would continue." I think it is obvious that these two statements are in conflict and may explain the predicament regarding the No. Spotted Owl...

RESPONSE *The No Action Alternative means that management would continue to be guided by the Jackson Klamath Management Framework Plan, the Lost River Resource Area Management Framework Plan, and the policies developed to conserve threatened, endangered, and other special status species. Therefore, the statements to which you refer merely reflect these facts though they may seem contradictory.*

314 **COMMENT** Page S-9. Column 2. Paragraph 2 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The discussion of the discrepancy between the population model's projection of current population and the observed population should include potential problems with the model. The magnitude of the discrepancy is unlikely to be fully attributable to "packing".

RESPONSE *The McKelvey model has been dropped in favor of the analysis conducted for the Supplemental Environmental Impact Statement Record of Decision. Population predictions and visibility are discussed in the Supplemental Environmental Impact Statement and summarized in Chapter 4.*

Special Areas

315 **COMMENT** Protection of areas of critical environmental concerns instead or additionally as Outstanding Natural Areas is needed to assure truly meaningful agency protection.

RESPONSE *Outstanding Natural Area is a recreational designation (Code of Federal Regulations 8352.0-2) and may not be appropriate for all areas of critical environmental concerns. The Federal Land Policy and Management Act requires protection of all the relevant and important features for which an area of critical environmental concern is designated. Area of critical environmental concern designation provides adequate protection under existing law and policy. Secondary designations such as research natural area or outstanding natural areas have been provided for some areas of critical environmental concerns only to clarify management objectives.*

316 **COMMENT** All areas of critical environmental concerns should be posted to prevent unintentional use, and should be closed to off-road vehicle use.

RESPONSE *Posting and other protective measures will be undertaken for each area of critical environmental concern, commensurate with values at risk, threats from inappropriate uses, and physical and biological factors (including threats from road access). Actions taken to prevent unintentional uses will depend on the primary values for which an areas of critical environmental concern was designated and will be developed during watershed planning and/or activity planning after completion of the Resource Management Plan.*

317 **COMMENT** A stronger policy is needed to prevent the harvesting of “minor forest products” from special areas.

RESPONSE *A stronger policy has been developed for minor forest products, which are now referred to as special forest products. The discussion of them has been expanded. See Chapter 2, Special Forest/ Natural Products.*

Cultural Resources

318 **COMMENT** The cultural resources discussion does not accurately address governmental bodies of federally recognized Indian tribes.

RESPONSE *The text has been revised to identify such bodies by the appropriate names or collectively refer to them as “federally recognized Indian tribes” or as “Indian nations.”*

319 **COMMENT** The cultural resources section of the document should include interaction and consultation with appropriate tribal governments regarding cultural/archeological issues.

RESPONSE *The Chapter 2 discussion of Cultural Resources has been expanded to address these interactions. The provision of the draft Resource Management Plan to the tribal governments is regarded as the first step in the consultation process. Further interaction and consultation regrading site-specific actions of tribal interest can be initiated either by the tribe or by the BLM as tribal concerns are identified. The BLM has suggested (and is in the process of consulting with each of the tribal governments) the development of Memorandums of Understanding that will encourage more interaction and consultation between the tribal governments and the BLM.*

320 **COMMENT** County policy states that the federal government shall not unreasonably obstruct historic American Indian cultural activities on their respective lands. The draft [KFRA] Resource Management Plan contains no analysis of the effect of various federal road closures, vehicle restrictions and riparian area designations as Areas of Critical Environmental Concern on the ability of Native Americans to have access to their lands.

RESPONSE *The BLM is required by law and regulations to consider the impact of our actions on cultural sites and use areas of Native Americans. Under the provisions of these guidelines, all environmental assessment and environmental impact statement documents consider the impact to specific sites. Thus all road closures, area of critical environmental concern evaluations, project developments, etc., are considered for potential impacts.*

The Klamath Tribe has not come forward with any comments on the Resource Management Plan which would indicate large specific areas which should for cultural reasons be set aside for protection. The Resource Management Plan addressed the impacts of management to cultural resource archeological sites.

We feel that the present planning system affords full participation of the Indian People in the process. It affords protection to cultural uses and sites.

321 **COMMENT** Concerning cultural material, last two sentences in summary, page 4-86 [of the draft KFRA Resource Management Plan/Environmental Impact Statement], if the value of the material is lost during removal for research, it would follow that the material has no research value while in place. Are cultural site digs an exercise in excavation or site/material evaluation?

RESPONSE *The sentence did not mean that the site had no value before it is excavated. What it implies is that if the site has to be excavated, even if the site is salvaged, it is still destroyed and cannot be excavated again. Under the best of conditions, not all data and cultural material can be salvaged from a site. We also do not know what questions archeologists will want to ask in the future or what techniques will be invented to recover data. If the site has been destroyed even with salvage, opportunities for future research on the site have been eliminated. The sentence does not imply that the site has no value but rather that the value will be used up by the excavation. Site excavation is always an exercise in learning about excavation. No two sites are ever exactly the same and the archeologist's skill are honed with each and every excavation. The purpose of the excavation however, is to gather data from the ground which will provide answers to questions about that site and the archeology of the region. It allows the formation of ideas about the past, the present, and the future.*

322 **COMMENT** BLM should through close coordination with the Tribes, act to inventory, evaluate, and protect sites of cultural, religious, and historic value as required by federal laws. As additional sites are located, BLM should alter its plans in order to protect them, while remaining sensitive to other uses of the lands.

RESPONSE *It is the policy of the Department of the Interior, Bureau of Land Management, to take into consideration the needs of Native Americans. The inventory, evaluation and protection of culturally significant sites is required by National Environmental Policy Act, National Historic Preservation Act, Archaeological Resources Protection Act, Native American Grave Protection and Repatriation Act, and the Native American Religious Freedom Act. Federal code of regulations dictate that consultation will be completed with the various tribal organizations.*

Whenever possible, plans are altered to protect important cultural sites. This is not always possible given the need to best serve the public interest and the requirements of other federal laws.

The inventory and thus the protection of many cultural sites will be dependent upon the Native Americans themselves for identification. Many sites and significant cultural areas (such as traditional use areas) *have no physical indications of their importance "on the ground". Unless the Indian People are willing to come forward and identify them, they can not be known to the agency and considered for protection. See also the response to comment number 320.*

Visual Resources

323 **COMMENT** Describe existing visual conditions along major highways, identify those segments appropriate for visual management, and direct management plans to achieve expected future conditions.

RESPONSE *BLM-administered lands have been inventoried, evaluated and assigned inventory classes based on their relative worth from a visual resource management point of view. Chapter 3 describes the results of the inventory process. The alternatives recommend various classes of visual resource management for BLM-administered lands including lands along major highways. Each VRM class has objectives (See Chapter 2 for the prescriptions) and these objectives are used to identify management prescriptions that would maintain, enhance, or preserve scenic values.*

324 **COMMENT** Long-term visual management objectives should consider the use of silvicultural practices to accomplish the VRM objectives.

RESPONSE *Such practices will be used in visual resource management Class II and III areas, where consistent with land use allocations protective of other resources. See Proposed Resource Management Plan Management Actions/Direction.*

325 **COMMENT** Work with adjacent landowners and others to maintain visual continuity.

RESPONSE *The BLM has authority or responsibility for visual resource management only on BLM-administered lands. We will work with adjacent landowners that are interested, to coordinate visual resource managements primarily during watershed analysis.*

Wild and Scenic Rivers

326 **COMMENT** State whether BLM land management actions that could impact on designated State scenic waterways will be coordinated with the State.

RESPONSE *This coordination will occur in accordance with the Memorandum of Understanding for River Management between the BLM, the Forest Service, and the Oregon Parks and Recreation Department.*

327 **COMMENT** Clarify how technical procedures were used by BLM to determine wild and scenic river suitability.

RESPONSE *Although a number of explicit technical criteria were used to determine which rivers would be found suitable under alternatives A, B, C, D, and E, the suitability findings in the Proposed Resource Management Plan were based on a more subjective weighing of these criteria plus public comment on the various rivers.*

328 **COMMENT** Consider the following additional criteria in suitability determinations.

a. Aggregated values of a given stream.
b. Importance of aggregated values on both a statewide and Statewide Comprehensive Outdoor Recreation Plan regional level.
c. Importance of smaller "less stellar" streams to program.
d. Non-local as well as local support for a given stream.

RESPONSE *These factors were considered in the Proposed Resource Management Plan.*

329 **COMMENT** How is it possible to recommend a given eligible river segment for national wild and scenic river status in one alternative and not in another?

RESPONSE *To show a range of alternatives the variation is based on the relative importance attached to economic trade-offs, quality of the river segments, and manageability of outstandingly remarkable values by the BLM. The purpose of alternatives is to consider varying management direction and resource allocations.*

330 **COMMENT** Wild and scenic river suitability is not based on a "Top Four" recognition.

RESPONSE *The "top four" assessment was used to structure Alternatives B, C ,and D, but was not directly used in the suitability findings process for the (draft Resource Management Plan/Environmental Impact Statement) Preferred Alternative or the Proposed Resource Management Plan.*

331 **COMMENT** The cursory suitability studies in the RMPs do not fulfill the BLM policy requirement. It is especially important to evaluate degradation to outstandingly remarkable values should a river not be given wild and scenic status.

RESPONSE *The wild and scenic river assessment reports in Appendix 2-E of the draft Resource Management Plan/Environmental Impact Statement were prepared in accordance with BLM policy. Probable degradation of outstandingly remarkable values, should a river not be designated under the National Wild and Scenic Rivers Act, is addressed in the section of each report titled Effects on Outstandingly Remarkable Values.*

332 **COMMENT** Another management option does not preclude wild and scenic status. The RMPs are not permanent and will no doubt change. The BLM should protect those rivers deserving of such status.

RESPONSE *The suitability findings proposed considered all those aspects of the question.*

333 **COMMENT** The alternative management options for "not suitable" rivers may not give them protection comparable to wild and scenic status.

RESPONSE *That is correct, the management on rivers found to be "not suitable" for inclusion in the national system will not necessarily provide protection comparable to what they would receive if they were found to be suitable and subsequently designated. This affects segments A and C of Antelope Creek, Barnes Valley Creek, Miller Creek, and Spencer Creek. The widths of proposed riparian reserves on these segments are 300 feet on each side of the stream, subject to some modification after watershed analysis. The BLM feels that these buffers coupled with existing laws and regulations will provide adequate protection for the identified outstandingly remarkable values (prehistoric, scenic, and fish resources). In addition, there are no known threats to those creeks that would be prohibited only by designation.*

334 **COMMENT** All values on eligible rivers should be maintained at their current level until the Congress acts.

RESPONSE *Outstandingly remarkable values on eligible rivers that were also found to be suitable will be protected until either the Congress or the Secretary of Interior (per section 2aii of the Act) acts. This protection will continue if the river is designated. If the BLM determines that an eligible river is found to be "not suitable", then neither the National Wild and Scenic Rivers Act nor any related policy requires the Congress to take any action, nor does it require that an agency must maintain any values.*

335 **COMMENT** Interim guidelines for eligible wild and scenic rivers result in de facto designation and management of those rivers in violation of the Wild and Scenic Rivers Act and Federal Land Policy and Management Act . Further, the interim guidelines exceed the Department of Interior's own regulations by excluding timber management activities along these rivers.

RESPONSE *Interim guidelines referred to as "de facto designation and management" is only in effect until suitability is determined or, if found suitable, a river's status is settled by legislation. This is consistent with Federal Land Policy and Management Act and in accordance with the Wild and Scenic Rivers Act. Timber management activities are excluded within the full 1/2-mile wide corridor for protection of such rivers only if they meet the criteria for a wild classification. No river segments were found to meet the criteria for a wild classification in the Klamath Falls Resource Area.*

336 **COMMENT** The simple fact that a river has anadromous fish, scenic, or recreational qualities does not qualify it as eligible for further study under the Wild and Scenic Rivers Act.

RESPONSE *True. As stated in the National Wild and Scenic Rivers Act, a river must be free-flowing and have one or more outstandingly remarkable values to be considered eligible for inclusion in the national system and to warrant further study. The BLM Manual 8351 specifies what criteria a resource must meet to be considered an outstandingly remarkable value.*

337 **COMMENT** The upper Klamath River should be withdrawn from the timber harvest base and given special protection for the following reasons: 1) The upper Klamath River can provide crucial connective wildlife habitat. 2) The upper Klamath River has religious and cultural significance for several Indian tribes. 3) The upper Klamath River contains numerous sensitive archeological and ethnohistoric sites. 4) The upper Klamath River has a magnificent, pristine viewshed (which should be designated as a visual resource management class I). 5) The upper Klamath River has outstanding recreational potential.

RESPONSE *All the resources mentioned in the comment have been found to be outstandingly remarkable values, and therefore are being protected in accordance with the National Wild and Scenic Rivers Act and BLM regulations. The canyon has been designated as visual resource management Class II not class I because it does not meet the objectives stated for class I (see the Visual Resources section in Chapter 2.*

338 **COMMENT** I understand a new grazing allotment is planned for the Klamath River Canyon. Even though I am told this is merely a formalizing of existing use, so that the BLM can gain management control, I strongly disagree with this approach. This area is botanically unique in Klamath County, and deserves protection commensurate with its recreational, historic, cultural, and scenic potential. If trespass cows are a problem, look at the adjoining allotments for a solution.

RESPONSE *One option for grazing management within the Klamath River Canyon would be the creation of a separate allotment encompassing just the canyon area. Authorized grazing use has occurred in the canyon for decades and will probably continue, in some form, in the future. The Proposed Resource Management Plan incorporates the Klamath canyon area into the Ward Pasture of the Edge Creek* *allotment (see Appendix L). This inclusion recognized the historical use of the canyon area as a de facto portion of the Ward pasture. Regardless of whether the canyon is made a separate allotment or not, permanent changes in grazing use will be based on the evaluations of site-specific rangeland monitoring information.*

339 **COMMENT** It is obvious that the BLM has either not assessed the economic impacts of the "Preferred Plans", or that it has chosen to ignore the obvious negative impacts: Proposing over 130 new miles of wild, scenic, or recreational rivers which will preclude important water resource development.

RESPONSE *The Wild and Scenic Rivers Act identifies prohibited types of water resource development activities. With the exception of the Salt Caves Hydroelectric Project, the number, size, value, and economic contribution of the water resource developments precluded in western Oregon is unknown. The potential value and economic contribution of the Salt Caves Hydroelectric Project has been identified in the Klamath Falls Resource Area Proposed Resource Management Plan. See Appendix N.*

Recreation

340 **COMMENT** Coordinate with State and local government on actions which may influence the Regional Strategies and Community Initiatives programs. Develop a multiple agency recreation planning program to promote recreational development and tourism.

RESPONSE *Such coordination is provided for in the plan and discussed where relevant but specific multiple agency planning is an implementation planning process function, not a part of the Resource Management Plan.*

341 **COMMENT** Develop trail plans.

RESPONSE *Trail plan development is a part of activity planning which would follow Resource Management Plan completion. Potential trail developments are identified on Map 2-10 and described in the Chapter 2 Recreation section.*

342 **COMMENT** Include provisions for designating areas to meet off-road vehicle demand.

RESPONSE *It is BLM policy that off-highway vehicle use is acceptable wherever it is compatible with established resource management objectives. The BLM-administered lands remain open to such use unless specifically closed or limited. After completion of the Resource Management Plan, the Resource Area will develop an off-highway vehicle implementation plan with more specific management provisions.*

343 **COMMENT** Strengthen standards and guidelines for off-road vehicle use.

RESPONSE *Those guidelines are contained in the Bureau's regulations (43 Code of Federal Regulations 8340). Revision of those regulations is beyond the scope of the Resource Management Plan.*

344 **COMMENT** Use of the term "off-road vehicle, rather than "off-highway vehicle," implies that vehicles leaving roads or trails is OK, which is not so.

RESPONSE *The term has been revised to off-highway vehicle.*

345 **COMMENT** Incorporate the Recreation Opportunity Spectrum rating system into the final plan.

RESPONSE *Due to the fragmented land ownership pattern and the density of the existing road system on BLM-administered lands in the planning area, Recreation Opportunity Spectrum is considered largely irrelevant to BLM decisions there. Recreation Opportunity Spectrum concepts will be used at the watershed analysis and/or activity planning stage for specific land areas where appropriate. See the Chapter 2 Recreation section.*

346 **COMMENT** We wish to express the concerns of many ATV and off-highway motorcycle users in and around the Klamath Basin. Quite often use goes on, unacknowledged by land manager, unless a problem or conflict arises. These problems or conflicts are sometimes difficult to address, because of the lack of a multiple use management plan, which includes motorized recreation.

RESPONSE *See the response to comment number 344. We have identified several BLM areas (Stukel Mountain, Hamaker Mountain, Bryant Mountain) where the potential to sign, develop and manage off-highway vehicle use exists. These off-highway vehicle trail plan developments are activity level planning which would follow Resource Management Plan completion.*

347 **COMMENT** Statements such as "Exceptions (to allow timber harvest) would be made if a natural catastrophe destroyed the high-value recreation potential of an area (page 2-68 [of the KFRA Resource Management Plan])". Windstorms and fires are natural ecological events which do not destroy the recreation potential of an area.

RESPONSE *We agree that windstorms and fire are natural events in forest ecosystems. However, because of past aggressive fire suppression efforts, unnatural forest fuel levels have created the potential for catastrophic wildfires. A catastrophic wildfire or windstorm could conceivably kill all the trees in a potential recreation site or area. The site or area's attractiveness from visual quality, physical access (through downed trees), and the perceived value from a recreationist viewpoint could be greatly diminished. Such catastrophic events would receive site-specific environmental analysis. At that time, the future recreation potential of an affected area would be discussed and any timber harvest plans would be adjusted accordingly.*

348 **COMMENT** Off-road vehicle's should be restricted to 1 or 2 limited areas, and most areas should be closed to same. Off-road vehicle's can tear up ground cover worse than grazing cattle. They also waste valuable energy, pollute the air, and make a lot of noise.

RESPONSE *See the response to comment number 342. The Klamath Falls Resource Area Proposed Resource Management Plan identifies areas where off-highway vehicle use is limited to existing roads and trails or closed to off-highway vehicle use.*

349 **COMMENT** There is no reason to open the public lands to such extensive use of all-terrain vehicle's. The damage done along Spencer Creek a few years ago is an example of how destructive these vehicles are on fragile environment. We live in a very dry area, which is even more susceptible to degradation by these vehicles. It takes the basic soil retaining plants much longer to reestablish in these desert lands.

RESPONSE *See the response to comment number 342. The following areas would receive new off-highway vehicle closure designations areas where water quality is being adversely affected; areas where soil erosion or other significant resource damage is occurring; Spencer Creek; Miller Creek area of critical environmental concern. The damage done along Spencer Creek occurred primarily on Weyerhaeuser Company land. The area has been fenced, posted closed to off-highway vehicles and is patrolled to control off-highway vehicle use.*

350 **COMMENT** Non-motorized recreational opportunities are expanding and will need additional facilities in the future. Stukel mountain should be viewed as an integral part of the Klamath Rails to Trails trail. Connecting bicycle paths and camping facilities should be included in the RAMP.

RESPONSE *Comment noted on non-motorized recreational opportunities. The Proposed Resource Management Plan calls for Swan Lake Rim to be managed for non-motorized recreation. The Klamath Rails to Trails (Oregon, California, and Eastern trail), mountain bike trails, day use and camping facilities will be discussed and considered during the development of an activity plan or recreation area management plan for Stukel Mountain.*

351 **COMMENT** Appendix 2-58 Sight-seeing and camping are popular in the canyon. Except near Round Valley Road it would be impossible to carry camping supplies down into the canyon or along the creek. When irrigation releases are being made it is very hard and time consuming, if not impossible, to hike down the creek. I have never seen signs of hiking or camping far from Round Valley Road along the creek bed.

RESPONSE *Camping in the Miller Creek area primarily occurs at the primitive "hunter" camps located just east of Miller Creek on Round Valley Road. Hiking most likely takes place between Gerber Dam and Round Valley Road. Below Round Valley Road the narrow, rocky creek presents considerable obstacles to hiking, especially during irrigation releases. No trail development is planned in those areas. A hiking/ horseback trail is proposed along the west rim of Miller Creek, below Round Valley Road.*

352 **COMMENT** Four-wheel drives, motorcycles and all-terrain vehicle's have been grouped together as off - highway vehicles. While we can share some trail systems with four-wheel drive vehicles, all-terrain vehicle's and motorcycles cannot ride on the roads. All-terrain vehicle's and motorcycles must abide by state laws while on the roads. Laws that require safety equipment, such as; turn signals, windshields and seat belts, making roadway use impossible. All-terrain vehicle's and motorcycles have different needs than four-wheel drive vehicles. This is one reason for requesting that all-terrain vehicle's be separated from the four-wheel drives when off-highway vehicles areas are being considered.

RESPONSE *The comment on the special needs of all-terrain vehicles and off-highway motorcycles is noted. We recognize that all-terrain vehicles and off-highway motorcycles need to be addressed separately from four-wheel drives when off-highway vehicles areas or trails are being considered. We will try to accommodate all the different off-highway vehicle user needs when developing off-highway vehicle trail plans during activity level planning (following Resource Management Plan completion).*

Timber - Management Direction/Practices

353 **COMMENT** Timber supply does not appear to be an important part of alternative formulation.

RESPONSE *Timber supply was a consideration, both in the Resource Management Plan/Environmental Impact Statement and the Supplemental Environmental Impact Statement. Since timber supply concerns paralleled concerns regarding socioeconomic conditions, which had higher visibility, its role in the formulation of alternatives was less visible.*

354 **COMMENT** Discuss the Bureau's willingness to accept "departure" from non-declining yield. If management in old growth emphasis areas is modified in the future, then harvest in future decades will change.

RESPONSE *It is implicit in any decadal or other cyclical planning process that management guidelines will change when the plans are revised. New information from research and monitoring as well as new* *legislation and policies may drive such changes. In subsequent planning cycles, the identified sustainable harvest may decline or increase, but is unlikely to stay the same. That perception does not make the currently estimated sustainable timber harvest a "departure". A departure is a deviation from currently estimated sustainable levels.*

355 **COMMENT** Explain the rationale for minimum harvest ages.

RESPONSE *Minimum harvest age refers to the youngest age at which a forest stand may be scheduled for regeneration harvest. In previous BLM plans, minimum harvest ages were set well below the culmination of mean annual increment in order to provide flexibility in balancing age class distributions, although over time harvest age rose to culmination of mean annual increment. These concepts for setting harvest rotations have become of lesser relevancy because of changes in objectives and because of scientific advances, including the realization that culmination of mean annual increment can occur at a wide variety of ages depending on thinning regimes and other features of the silvicultural system.*

For this plan, the rationale for setting minimum harvest age differed between the alternatives. For Alternatives A, B, D, and E, minimum harvest for the west side was set at 60 years based on the economics of regeneration harvesting of younger aged stands. For Alternative C, minimum harvest ages of 150 years were designed to achieve desired habitats and ecological objectives. For the Proposed Resource Management Plan, a minimum harvest age of 120 years was set for the Matrix (general forest management area) based on attainment of wood quality objectives, logging economics, habitat conditions, landscape seral composition, and retention of site productivity.

356 **COMMENT** The Resource Management Plan calls for harvest of one-quarter of the stands 100 to 200 years old during the next decade, a rate not sustainable.

RESPONSE *The requirement that harvest be sustainable is applicable to harvest from all age classes combined, not to separate age class groups. The Proposed Resource Management Plan will harvest 16 percent of such stands on BLM-administered land in the first decade, and 32 percent of such stands on BLM-administered land available for long-term timber management.*

357 **COMMENT** There are no provisions for phasing down timber harvest levels. The BLM should consider a one-decade departure from the non-declining harvest level.

RESPONSE *The BLM's sustained yield mandate makes no provision for such a phase down of planned harvest (probable sale quantity). The BLM lacks such authority, other than for a departure which would cause a negligible subsequent drop below sustained yield levels. The stand conditions on lands available for timber harvest in the Proposed Resource Management Plan, and overall plan objectives, would cause any significant departure to result in substantial drop in sustained yield levels in future decades.*

358 **COMMENT** The practicality is questionable of logging patches of five acres or less and of leaving a few green trees per acre (which might be genetically inferior but would likely overstock planted regeneration areas if not blown over first).

RESPONSE *We disagree. Patch harvesting using cat, cable, or aerial systems has been widely demonstrated to be practical in southern Oregon and is key to development of spatially diverse stands and the development of understory regeneration of the appropriate species. The BLM expects to leave trees in units that reflect the range of genetic quality which exists in nature and to use stock from its genetic improvement program to maintain the genetic diversity and quality of forest stands.*

359 **COMMENT** It is inappropriate to include "deferred" old growth areas and watersheds in the timber harvest assumptions.

RESPONSE *The Oregon and California Act requires the BLM to identify the sustainable harvest level.*

360 **COMMENT** Lack of trained silviculturists may be a barrier to implementing the proposed silvicultural activities.

RESPONSE *We recognize a need to modify our skill mix and provide or obtain additional training.*

361 **COMMENT** More detailed silvicultural prescriptions are needed.

RESPONSE *Due to the somewhat experimental nature of many prescriptions, they must be adaptive and variable from site to site, as we learn from our own experience and that of others attempting active ecosystem management.*

362 **COMMENT** It is difficult to determine how proposed silviculture will actually influence stand growth, yield and structure.

RESPONSE *The ORGANON model for southwestern Oregon was developed to predict the yields, species composition, and structural complexity of multiple-age stands and many examples of multiple-age stands are available in southern Oregon which arise from either management actions or natural disturbance. Modeling, and the examples provided by past management, provide both an opportunity for retrospective silvicultural studies and for further experimentation through adaptive management.*

363 **COMMENT** Use of formaldehyde as a binder in fertilizers is illegal.

RESPONSE *The use of formaldehyde in fertilizers is not illegal. When selecting products for use, federal agencies screen for the presence of formaldehyde and select products without it if they are similar in effectiveness. For aerial fertilization, only pelletized fertilizers are considered highly effective because their weight carries them through the canopy to the forest floor. The only binder commonly used for pelletizing is formaldehyde, which forms urea into hardened crystals that not only prevent dusting but protect against caking and provide slow release of the fertilizer.*

364 **COMMENT** The court injunction on BLM's use of herbicides has not been lifted.

RESPONSE *As long as the injunction remains in place, herbicides will not be used. The probable sale quantity is not dependent on the use of herbicides, but in the absence of their use on a long-term basis, costs of management would increase.*

365 **COMMENT** The plan makes no allowance for failure to meet timber production goals that hinge on the success of intensive management practices. Past efforts to increase yields through intensive management have fallen short of expectations.

RESPONSE *During the period of 1984-1992, the Bureau's intensive management investment in western Oregon supported 117 percent of the offered volume, and 90 percent of the planned volume. The Proposed Resource Management Plan provides for reduction of timber sale offerings below the probable sale quantity if investments in timber management do not support offering the probable sale quantity. Intensive management practices on all available lands will provide opportunities to increase harvestable materials in the future.*

366 **COMMENT** The ASQ should be reduced to reflect realistic assumptions for funding intensive management practices.

RESPONSE *Annual timber sale levels will be adjusted to reflect any sustained shortfall in funding for the intensive management practices on which the probable sale quantity is partly contingent. The probable sale quantity itself properly estimates the level of harvest that is biologically sustainable given the agency's management direction.*

367 **COMMENT** Concerning timber harvest, we suggest the plan should address the tremendous opportunity to manage the second growth stands - many of which occur as understory or intermediate stands with old growth overstory. New harvest techniques using mechanical means can remove portions of the understory that will enhance spotted owl habitat, enhance survival of old growth trees and create a longer term diversity of wildlife habitat. Likewise, overall forest health can be improved. Just "preserving" stands from entry will ensure poor health, lack of long term diversity and a waste of precious natural resources.

RESPONSE *See page 2-65, under Allowable Sale Quantity, paragraph 3 of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement and Appendix G of the Proposed Resource Management Plan. The opportunity to manage second growth stands was addressed. Sales of submerchantable understory material suitable for chips would be made. The intent is to treat both overstory and understory trees. Thinning understories would increase vigor of the residual stand and improve forest health, reduce fuel hazard, utilize material formerly wasted, and provide jobs and income for workers engaged in the thinnings.*

368 **COMMENT** Since clearcutting has been a major cause of the decline of many fish populations, there should be no more clearcutting. Also, since many fish species are being listed as sensitive, threatened, or endangered, there should be no more logging of any old growth forest and no new roads in watersheds where wild salmon and trout exist.

RESPONSE *The majority of harvest in the planning area would be individual tree selection and commercial thinning. Approximately 15 percent of the west side harvest area would be interspersed regeneration patch cuts (up to 3 acres in size). These patch cuts are designed to leave retention trees (16 to 25 large green trees per acre). Clear cutting involves the removal of an entire stand in a single entry. We plan no clearcutting practices under the Proposed Resource Management Plan.*

In the Proposed Resource Management Plan there is a limited need for new roads (approximately 1.7 miles per year). These would be constructed with safeguards to limit erosion and sedimentation into streams. The adverse effects of new road construction to fisheries and water quality (as mentioned on page 4-14 of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement) is expected to be low (see also table 4-32, page 4-80 of the draft Resource Management Plan/Environmental Impact Statement).

369 **COMMENT** With all your talk of "sustainable forestry", you [KFRA] still seriously consider clearcutting to be an acceptable alternative. Clearcutting's effects on soil erosion and long-term soil productivity; water cycles and water quality; plant, animal, fish, bird, microbial and other life; endangered species; the esthetic experience of human visitors; the long-term economic viability and stability of a region and its human population are well documented. Clearcutting entails far more herbicide and fertilizer use, waste, ecosystem degradation, job loss related to automation, and contribution to planetary problems such as species and gene pool loss, desertification, and the greenhouse effect, than does selective cutting.

RESPONSE *The Klamath Falls Resource Area's harvesting practices have switched from primarily even-age to uneven-age management. No clearcutting practices are planned under the Proposed Resource Management Plan.*

370 **COMMENT** PA W. Side [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. "No minimum harvest age would be established because harvest could occur across the entire range of age and diameter classes",..... one way to describe a "clear cut"...

RESPONSE *Our statement was not clear in expressing our intent. We plan to do partial harvesting in the planning area, not clearcutting. No clearcutting would be done under the Proposed Resource Management Plan. We have amended this statement to include the words "partial cut harvest" to emphasize our intent.*

371 **COMMENT** ... objects to timber management plan activities [in the KFRA] that represent their principle objective to be the removal of "shade tolerant species, such as white fir and shasta red fir" for "forest health considerations" when a preponderance of older age ponderosa pine, sugar pine and Douglas fir are also marked for cutting.

RESPONSE *A principal goal of silvicultural prescriptions is to reduce the stocking level of stands to match site capabilities. A larger proportion of shade tolerant species, such as white fir, would be removed in such thinning operations. These species are less adapted to plant communities experiencing periodic fires under natural conditions. A "preponderance" of the overstory trees would not necessarily be cut, since overstory stocking varies with each stand. Intolerant species, or species of medium shade tolerance (ponderosa pine, sugar pine, Douglas fir) would be favored as "leave trees" in the overstory.*

372 **COMMENT** The [KFRA] BLM has not discussed ecological values of the assumed 58,950 acres of "suitable" juniper woodlands on the Resource Area. The draft plan also does not discuss what the proposed management will be. The BLM needs to discuss in its Resource Management Plan/Environmental Impact Statement any plans for cutting and what the specific purpose is behind any proposed manipulation.

RESPONSE *The majority of our juniper stands occur in the eastern half of the planning unit. These lands total 64,800 acres.*

Timber - Productivity/Sustainability/Forest Health

373 **COMMENT** Set specific goals and objectives for forest health, detailing how proposed management strategies will address it and what measures will be implemented to improve unhealthy forest conditions.

RESPONSE *Ecosystem (forest) health was defined by the Forest Ecosystem Management Assessment Team as the state of an ecosystem in which processes and functions are adequate to maintain diversity of biotic communities commensurate with those initially found there. As such the concept includes the condition and characteristics of stands and landscapes we considered under the topic of Biological Diversity and Ecological Health. General forest health and ecosystem diversity and function goals were set as part of the Proposed Resource Management Plan. The result of application of these goals at the planning level and the extent to which the plan alternatives will result in forests which are within the range of natural conditions is described in Chapter 4. Further analysis will occur in landscape analysis.*

374 **COMMENT** Assess forest health issues, particularly the role of salvage operations.

RESPONSE *Salvage operations will harvest the result of accelerated mortality of trees caused by poor forest conditions in periods of drought or other environmental stress. Attainment of higher levels of forest health will result in mortality declining to levels which are normal for relevant seral stages. Salvage does not by itself have a positive ecological effect and may have a negative effect if carried to excess. Receipts from timber salvage are made available for projects which will help restore healthy ecological conditions.*

375 **COMMENT** Failure to retain the large old insect resistant trees has been attributed to much of the forest health problems presently being experienced in the Northwest.

RESPONSE *Resistance to insects is a function of tree/forest vigor more often than size or age of individual trees. Vigorous low density widely spaced trees rarely succumb to insect problems. In stands where density is greater than long term site potential to support vegetation during drought periods the vigor of trees is lower. Insects, disease or fire thin out the most susceptible trees.*

Size of trees is a factor in resistance to natural disturbance regimes such as frequent fires that reduces forest density by killing trees with thin bark and/or foliage that provides fire-ladders. Older trees are insulated from such thermal intrusion and normally have elevated tree crown bases. Selective harvesting of older-larger sized trees or removing older stand components has contributed to homogenous stands in fire prone areas, lowering overall stand fire resistance and thus patch survival following catastrophic events.

Not permitting fire to play its traditional (natural) function has had a significant impact on both eastern and western Oregon. In fire-prone areas removal of the large fire resistant trees has also contributed to problems in implementing underburning to reduce density of brush/hardwoods/understories of confers. In moderately to very dense stands the recent drought cycle has placed some of the largest trees within these stands at risk since they have not been able to compete successfully for limited soil moisture. Once weakened or killed by drought, they are readily attacked by insects.

376 **COMMENT** Existing conditions of insects and diseases are not addressed or are superficially addressed and quantitative data are not included. Little or no effort is made to project effects of new management practices on future insect and disease impacts.

RESPONSE *This is an emerging issue that was not identified during scoping of the plan. Consequently, previous inventories did not address such existing conditions. These concerns are part of the focus of ecosystem management, but too little is known for us to forecast comparative outcomes. As we learn more, our management will adapt. Additional information has been added to Chapter 4 in the Ecosystem Health section. Silvicultural treatments of individual stand vigor, insect and disease problems, and other stand and landscape conditions (see Appendix G).*

377 **COMMENT** The plan indicates that a control methods will be applied to insects and pathogens if large outbreaks develop. A prevention approach, never allowing outbreaks to develop, is preferable.

RESPONSE *A preventive approach is preferred for insect and pathogens as well as dealing with competing vegetation and animal damage. Identifying ecosystem potentials, using density management and underburning appear to be the preferred prevention/control method.*

378 **COMMENT** Forest health is not defined.

RESPONSE *Discussion has been added to Chapter 3, which includes a definition.*

Timber - PSQ

379 **COMMENT** Include a discussion of the ASQ philosophy and identify whether the ASQ is a goal or a mandated level of timber production.

RESPONSE *Discussion has been added to the Introduction to Chapter 4.*

380 **COMMENT** Clarify growth and yield assumptions.

RESPONSE *A general description of growth and yield assumptions and the modelling procedure used for each sustained yield unit is contained in Appendix V to the Proposed Resource Management Plan/ Final Environmental Impact Statement. The actual yield tables used are available for review at the resource area office.*

381 **COMMENT** The approach used for incorporating genetic improvement into the growth and yield models is inappropriate.

RESPONSE *Predicted genetic gains are based on individual tree growth differences in young progeny evaluation plantations. We recognize that it has not yet been demonstrated that these gains are achievable as per-unit-area yield gains at rotation. Field tests comparing performance of improved and unimproved stock continue to be established to verify the estimates. The Northwest Tree Improvement Cooperative, of which the BLM is a member, has initiated a series of genetic gain trials to evaluate genetic gain on a yield-per-unit-area basis. In the meantime the results from progeny evaluation plantations are the best data we have. The effect on the calculated probable sale quantity is negligible.*

382 **COMMENT** Adjustments to the yield models for genetics and fertilization are speculative.

RESPONSE *The short term changes in stand volume or tree size which occur in young stands as a result of forest fertilization are well documented in the research literature. Estimation of long term effects on yield are the result of extrapolation of growth trends in simulators such as ORGANON. Fertilization responses in ORGANON are consistent with other published estimates of growth response and are covered by a Ph.D. thesis available at Oregon State University or at the Medford district office. Since projections are based on considerable knowledge about tree and stand growth, these growth projects can be viewed with a reasonable level of confidence, although there is disagreement within the research community with some scientists feeling that responses are higher than those used in ORGANON.*

The expected gains from the genetic selection program in western Oregon are currently estimated from conifer species studies and the results of early progeny tests from the Northwest Tree Improvement Cooperative. From other forest studies it has been found that the major changes in growth attributes can be estimated through changes in growth height-age curves. Young stand growth studies are in place throughout western Oregon to provide data on benefits of growth of selected progeny trees. The current young growth of these trees has then been modelled through growth simulators to estimate gain in volume. Tests comparing performance of improved and unimproved stock continue to be established to verify the BLM estimates.

Part of the predictive process is indicating what to do now in order to increase the likelihood of a desired future condition. In the instances of genetic selection and fertilizer, gain is both an increase in volume and the quality/return from the resultant products. We have used average responses for acreage predicted to be treated and will monitor as well as continue research.

Genetic effects will become important in approximately 4 decades when currently treated stands will be a major part of probable sale quantity when those areas planted with genetically improved stocked undergo thinning and limited regeneration harvest. Thus, the evidence should be available when the gains are being realized. Most simulators demonstrate low impact on current probable sale quantity calculations and are appropriately conservative.

Fertilization and commercial thinning results are more immediate in their effects, as treatment and harvest in commercial thinning can occur within the same decade. Plots exist in western Oregon which indicate the expectation of average gains for treated stands is reasonable. Gains related to fertilization at time of pre-commercial thinning are more speculative. But again, as in the case of genetic selection, the effects will occur in the future.

383 **COMMENT** Compare modeled, first-decade growth to historic, empiric growth.

RESPONSE *The inventory design utilized to estimate current standing volume does not permit the derivation of actual decadal volume growth in the forest. Growth of stands is projected in the TRIM-Plus model using empirical yield tables, approach to normality functions, partial-cut yield tables derived from ORGANON and managed stand yield tables developed from ORGANON. Comparisons of projected growth with empirical data and research data occurs in the BLM paper "Modeling the Future Condition and Yield of BLM Managed Forests" available at the Medford District. Long term studies of the effects of intensive management on stand yield do not exist in southwestern Oregon, south of Tiller; however, extrapolated yields are consistent with existing empirical data for the region and for northern California.*

384 **COMMENT** Compare the stands scheduled for treatment in decade 1 from the TRIM analysis and those stands scheduled in the operational plan for the first decade.

RESPONSE *The ten-year scenario is not an operational plan but a modeling tool that selects the quantity of stands with similar age and previous management attributes as those modeled in the TRIM-Plus harvest simulator.*

385 **COMMENT** It appears that ASQ is based on a linear model similar to FORPLAN.

RESPONSE *The TRIM-Plus is a timber yield model similar in many ways to FORPLAN timber yields. Major advantages were that TRIM-Plus could be run on enhanced IBM/AT compatible microcomputers and many runs could be made inexpensively and directly available for district personnel access, thus making runs adapted to local conditions and age classes. TRIM-Plus is a binary search model with the capability of structuring the forest in unlimited units based upon site, species, stocking levels and management prescription. Different minimum harvest ages can be used on component units.*

The FORPLAN, in comparison, is a linear program optimization model requiring production coefficients for various resource values. It includes many more 'inputs' and addresses many 'outputs' in addition to timber yield.

386 **COMMENT** Display a plot incorporating expected yield per acre at various rotation lengths multiplied by pond value per cubic foot. Include rotations up to 300 years.

RESPONSE *There is not enough data to form a realistic basis for such estimates. Speculation on long-term future pond values would be more misleading than useful.*

387 **COMMENT** Short-term harvest limitations due to emerging concerns over threatened and endangered species, watershed protection and the cumulative effects may limit ASQ more than sustained yield constraints do.

RESPONSE *The interaction between probable sale quantity calculation and our ten-year timber management scenario has permitted us to address cumulative watershed effects as well as is practical in a checkerboard ownership pattern where private actions are speculative. Ecosystem management is intended to minimize the need to add unforeseen restrictions on timber harvest due to listing of additional threatened and endangered species.*

388 **COMMENT** Use a model such as FORPLAN or SARA, or expansion of your 50-11-40 rule analysis model, to determine the potential harvest acreage by subarea and type in the first few decades of the plan.

RESPONSE *The ten-year scenario identifies potential harvest acreage, which can be determined by subarea, for the first decade. Extending the scenario into the future would lose reliability due to the adaptive nature of the plan.*

388 **COMMENT** The [KFRA] Resource Management Plan proposes a non-sustainable level of timber harvest. The Resource Management Plan calls for harvest of one-quarter of the stands between 100 and 200 years old during the next decade. This is not a sustainable rate of harvest. The ASQ should be reduced to reflect long-term sustainability. Both Federal Land Policy and Management Act and Multiple-use Sustained Yield Act require that the BLM maintain harvest levels in perpetuity.

RESPONSE *The Proposed Resource Management Plan would include 32 percent of the mature stands in the Matrix (general forest management area) in the first decade's timber harvest. Most harvest would be selective, and entire stands would not be harvested, as is the case with clear cuts. The requirement that harvest be sustainable is applicable to harvest from all age classes combined, not to separate age class groups.*

389 **COMMENT** It is obvious that the BLM has either not assessed the economic impacts of the "Preferred Plans", or that it has chosen to ignore the obvious negative impacts: cutting in half the allowable sale quantity of timber on BLM lands.

RESPONSE *Refer to the Effects on Socioeconomic Conditions section of Chapter 4. This section has been revised.*

Timber - Inventories

390 **COMMENT** Update the starting timber inventory for ASQ calculation to October 1, 1993.

RESPONSE *For the Proposed Resource Management Plan/Final Environmental Impact Statement, it was updated to October 1, 1992. Only a slight change (increase) has occurred in the following year.*

391 **COMMENT** Use data from the Forestry Intensified Research project, Oregon Department of Forestry and other studies to continue to validate the accuracy of forest inventory data and further evaluate lands currently determined to be unsuitable. If it can be determined that these lands can be managed for timber production, return them to the suitable base. Likewise, lands in the suitable base which are determined to be unsuitable through monitoring should be taken out of the base.

RESPONSE *Adaptive management as discussed in the Use of the Completed Plan section of Chapter 2 provides for such adjustments.*

392 **COMMENT** Revisions in inventory procedures to monitor growth and yield are likely to be necessary.

RESPONSE *Revisions in inventory procedures are expected and are currently underway. As part of the adaptive management philosophy, monitoring is a critical function in the forest management plan and this include growth and yield. As the objectives of management by land-use allocation become clearer, expected outcomes are projected, and multiple resource data needs are determined, the inventory systems will be delineated. Peer review is anticipated.*

393 **COMMENT** How does the starting inventory in the TRIM-Plus model compare to the Bureau's most recent inventory?

RESPONSE *Differences in terminology, acreage, and modelling make a direct comparison of these inventories nearly impossible.*

394 **COMMENT** Volume equations and site index equations may be giving rise to biased estimates in the standing inventory.

RESPONSE *A bias in estimation in small diameter trees is recognized. The BLM volume equations had high volume levels in small diameter trees. The net effect on probable sale quantity calculations dependent on older age classes was not considered worth correcting in the DEIS stage. Since the Proposed Resource Management Plan probable sale quantity is less dependent on older age classes, adjustments have been made. These newer equations compare favorably with other estimates.*

395 **COMMENT** Monoculture tree planting, mostly Douglas fir, should be replaced by planting a more representative series of trees, both commercial and noncommercial so the forest has some semblance of a natural forest.

RESPONSE *The east side of the Klamath Falls Resource Area planning area is primarily a ponderosa pine forest, while the west side is ponderosa pine and mixed conifer forest composed of Douglas fir, white fir, Shasta red fir, sugar pine, white pine, incense cedar, and lodgepole pine. Reforestation activities strive to use species naturally present on the site.*

396 **COMMENT** Timber.... management.... If effective management is used, there should be a balance created. Start by planting in existing areas that have been cut or on hills or fire damaged areas.

RESPONSE *Understocked harvest units and forest areas burned in wildfires are priorities for tree planting, both under our existing plan and the proposed plan. Sites on "hills" would be planted if they are commercial forest land and are understocked.*

Timber - Demand, Supply, and Market Effects

397 **COMMENT** Analysis of the timber supply situation is more optimistic than warranted. Portray additional scenarios reflecting lower potential harvests by other parties, as well as uncertainty of implementing proposed BLM sale levels.

RESPONSE *The timber supply analysis has been revised for the Proposed Resource Management Plan/Final Environmental Impact Statement. The analysis now reflects implementation of the Supplemental Environmental Impact Statement Record of Decision on national forests, and includes updated private land timber harvest information consistent with the analysis in the Supplemental Environmental Impact Statement. Each BLM alternative is analyzed in this updated regional timber supply setting. The result is lower regional timber supply for all alternatives than shown in the draft Resource Management Plan.*

Energy and Mineral Resources

398 **COMMENT** Identify State-owned mineral rights and acknowledge non-impact of the plan on those and other existing valid rights.

RESPONSE *The BLM has no record of the owners of non-federal mineral rights. The acknowledgment has been added.*

399 **COMMENT** A mineral inventory should be conducted before withdrawals are recommended.

RESPONSE *The withdrawal proposals in the Proposed Resource Management Plan are based on the sensitivity of other resources to significant damage from mineral exploration and/or development activities as they would be anticipated to occur under present laws and regulations. The formal recommendation to the Secretary of the Interior for withdrawal will be accompanied by a mineral potential report to support a fully informed decision.*

400 **COMMENT** The appendix showing locatable mineral management requirements shows only standard requirements, under 43 CFR 3809. Additional restrictions in management areas such as area of critical environmental concerns, wild and scenic rivers, visual resource management class II areas and special status species habitat should also be shown.

RESPONSE *Such restrictions are (will be) broadly identified on the mineral management restriction maps for the proposed Resource Management Plan (that will be developed for the record of decision). The effects of such restrictions are site specific and mining-plan specific, and cannot be known without a specific proposal to analyze.*

401 **COMMENT** Categorizing as low potential all areas where there is insufficient information to determine mineral potential is inappropriate.

RESPONSE *The relevant column header in the Chapter 3 tables have been revised to reflect that the identified acres are a combination of low and unknown potential.*

402 **COMMENT** It is obvious that the BLM has either not assessed the economic impacts of the "Preferred Plans", or that it has chosen to ignore the obvious negative impacts: Doubling the number of acres closed to mining.

RESPONSE *The number of acres closed to mining does not change by alternative. See table 4-41 on page 4-102 of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement for such an analysis. The number of acres closed to mining will increase by 581 acres with the proposed withdrawal of the Old Baldy research natural area/area of critical environmental concern from operation of the mining laws. There is no mineral exploration or development occurring in this area. No economic impact would result from the proposed withdrawal because there is no existing mineral development that would be curtailed by the withdrawal.*

403 **COMMENT** ...the BLM ignores the potential for economic development already identified within the Klamath Falls Resource Area. For example, the Resource Management Plan/Environmental Impact Statement apparently ignores the long-term benefits of additional revenue available to the City of Klamath Falls and the economic development targets of those revenues available from the completion of the Salt Caves Project. These revenues have been ignored in the long-term because in the main they fall outside the ten-year planning horizon for the Resource Management Plan. Even though the BLM takes up to a

300-year look in assessing the benefits of reduced timber harvest on the overall forest ecosystem... it is inconsistent to attribute long-term benefits to the planning timber resources... and at the same time ignore long-term economic benefits of the use of resources in the Klamath Canyon. The BLM analysis also ignores the short term benefits of construction jobs and revenues associated with the Salt Caves Project...

RESPONSE *Please refer to Chapter 3, Affected Environment, Socioeconomic Conditions page 3-96 and Effects on Socioeconomic Conditions in Chapter 4. For additional information please refer to the Salt Caves Hydroelectric Project Environmental Impact Statement, Federal Energy Regulatory Commission 1990.*

404 **COMMENT** The [draft KFRA] Resource Management Plan/Environmental Impact Statement is inconsistent with the number of acres quoted in various chapters and plans. The introduction states that the BLM administers 212,000 acres of land and resources (I understand that to be public domain, Oregon and California, and acquired lands) plus an additional 21,000 subsurface acres on non-federally owned surface land; for a total of 233,000 acres. Many places in the RPM/Environmental Impact Statement shows acres exceeding 233,000, or by calculations these greater numbers can be arrived. By calculation Table 2-10 has 235,900 acres.

RESPONSE *The reason that there are more mineral acres in the* ***draft*** *plan Tables 2-10, 11, and 12 than Table 3-35 is because 8,000 acres of mineral withdrawal will be revoked as a result of the withdrawal review process (see Table 2-9 in the Proposed Resource Management Plan). The withdrawal review was completed in the existing situation, but the withdrawals have not been revoked yet. They will be in the future regardless of the alternative (including No Action selected). In addition, the acres in Table 3-35 are different than 233,000 acres because there are many different types of mineral reservations and withdrawals, some total, some fractional, and the reservations and withdrawals are not always the same for locatable, leasable, or salable minerals.*

Livestock Grazing

405 **COMMENT** We have been 6 years in one of the worst droughts in Oregon's history. How can you make any kind of determination, scientifically, or intelligently, based on forage used in a situation like this?

RESPONSE *Although we believe the changes in grazing use proposed in the Proposed Resource Management Plan are accurate, reasonable, and supportable, all actual changes in grazing use will be based on the results of an interdisciplinary allotment evaluation of rangeland monitoring studies, with public input and review. Rangeland monitoring studies measure various attributes of the vegetative community as well as quantifying actual grazing animal usage. Oregon BLM policy requires a minimum of 3 years of data for evaluation, helping arrive at a more accurate average outcome and avoid the problems of a "one point in time" analysis. The monitoring and evaluation process is ongoing and dynamic, in that priority allotments will be monitored indefinitely and future data used to fine tune grazing management through time. See Appendix L, Rangeland Monitoring and Evaluation section, within the Proposed Resource Management Plan for an explanation of this process.*

406 **COMMENT** In view of all the above, we recommend that temporary cuts be made as needed and no action be taken until the drought is over and a proper evaluation can be made. After all, you are involved in ten years of our income.

RESPONSE *The BLM has and will continue to work with permittees/lessees to balance livestock use with the year by year capabilities of the rangelands. Permanent changes in grazing use will be based on the evaluation of allotment specific rangeland monitoring information. The effects of drought would be one of many variables considered during the evaluation process in formulating management actions.*

407 **COMMENT** With respect to livestock grazing: I recommend that livestock grazing be prohibited in the canyon. I note that on page 2-25, Volume I of the Resource Management Plan it is intended to establish a new grazing allotment in the canyon while on page 2-77 of Volume II it is stated that livestock grazing in the canyon will be prohibited. On a recent trip to the canyon, I noted that livestock had trampled and completely eaten a patch of watercress in a draw emanating from a spring. The area is located on land owned by Pacific Power and I doubt suitable measures would be implemented to preclude further depredation by livestock. I do not believe this prohibition would cause a hardship to ranchers as the number of livestock I have seen in the canyon is minimal.

RESPONSE *The information you reference on page 2-77, Volume II of the draft Resource Management Plan/Environmental Impact Statement is reiterated for information purposes from the Redding (CA) BLM draft Resource Management Plan/Environmental Impact Statement and does not pertain to the Klamath Falls Resource Area. Also, refer to the response to comment number 338.*

408 **COMMENT** Appendix 2-196 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. Dry Prairie - Identified concerns No management system; we have had a three year rotation system for all 14 years I have grazed cattle on the allotment.

RESPONSE *You are correct that the Dry Prairie allotment has had a rest-rotation grazing system in place for some time. The "Identified Resources Conflicts/Concerns" statement should read "Grazing management system established but not formally documented" as the existing allotment management plan has not been fully revised to reflect the changes in management. The "Management Objectives" statement, opposite the above, should read "Revise existing Allotment Management Plan". Changes to this effect for Dry Prairie, as well as several other Gerber Block allotments, is included within the Proposed Resource Management Plan.*

409 **COMMENT** The Juniper-bunchgrass lands need more consideration. The degradation of rangelands caused by juniper is discussed in Attachment A. ("The Biology and Ecology of Western Juniper" by Dr. Lee Eddleman.) The removal of invasive juniper from infested lands has restored former grasslands to productive status approximating conditions of the pre-European settlement period. Biologic diversity is greatly enhanced. Different methods of juniper elimination are possible. The method advocated by Buckhouse and Eddleman seems well adapted to the situation.

RESPONSE *See page 2-65 of the draft Klamath Fall Resource Area Resource Management Plan/ Environmental Impact Statement, Vol. 1 for the Preferred Alternatives "Harvest of Juniper Woodlands" proposal. Also, refer to the responses to comment numbers 127 and 128. Both Drs. Buckhouse and Eddleman have toured portions of the KFRA's proposed juniper treatment areas and their input has been and will continue to be solicited.*

410 **COMMENT** Page 2-63. The [draft KFRA] Resource Management Plan refers to setting specific utilization levels within selected riparian habitats that allow for the production of a moderate sustained yield of forage. The reasons for selecting certain areas should be provided in the Resource Management Plan. These criteria should include the presence or downstream existence of threatened and endangered listed fishes. To ensure adequate riparian condition, these utilization levels should be used as "kick out" points beyond which no use would be allowed. Fencing to exclude livestock use is mentioned in the Resource Management Plan, but the intent of this fencing is not clear. Fencing should be used to protect listed species, as appropriate.

RESPONSE *Setting of specific utilization levels within selected riparian areas or planning for fencing livestock out of riparian areas would occur during activity-level planning for a grazing allotment. Fencing to exclude grazing in certain riparian areas may occur to meet resource condition and management objectives. Site specific monitoring and inventory data and resource conditions need to be evaluated thoroughly in order to set utilization levels or plan fencing projects. This is most appropriately done at the activity-planning level. The Proposed Resource Management Plan/Final Environmental Impact Statement is used to develop broad-based goals and objectives for riparian areas, which are then carried forward into more site-specific plants.*

411 **COMMENT** ...the biodiversity section in Chapter IV [of the draft KFRA Resource Management Plan/ Environmental Impact Statement] recognizes that importance of a regional perspective or landscape view that takes into account the surrounding private lands management. The grasslands component of the sagebrush steppe was fully addressed in this light, however, in the Preferred Alternative. The management goal of livestock grazing in the Preferred Alternative (4-25) is to maintain a diversity of seral stages. But regionally what is needed is not a diversity of seral stages on public lands but rather late seral and climax grasslands in order to provide balance for the preponderance of early seral stage grasslands or agricultural lands that occur on private lands in the region.

RESPONSE *Watershed analysis or province analysis will often precede environmental analysis of specific proposals, and the findings of such preceding analyses will be addressed in documentation of the environmental analysis. Ultimately, watershed analysis (which will include relevant, available information about private lands) will serve as the basis for developing project-specific proposals and determining monitoring and restoration needs for a watershed. Project-specific National Environmental Policy Act planning will use information developed from watershed analysis. By improving understanding of the ecological structures, functions, processes and interactions occurring within a watershed, watershed analysis will enhance the ability to predict direct, indirect, and cumulative impacts of specific proposals or actions in that watershed, including livestock grazing.*

412 **COMMENT** Our first concern is the time of use (4/15-8/1) on Dry Prairie unit. This is a cut of 10 percent. We would like to know what scientific or criteria you used to arrive at these cuts and the dates of usage.

RESPONSE *The proposed season of use of 4/15-8/1 is not a cut of 10 percent in animal unit months levels. There is no proposed cut in permitted animal unit months in the Preferred Alternative for Dry Prairie. It does propose a reduction in the season of use of 15 days (11 percent less time) and shifts the season into a somewhat earlier time slot. Refer to the response to comment number 405.*

413 **COMMENT** We know what your thinking is on regrowth. The August 31 off date would still give a month to a month and a half at least for regrowth.

RESPONSE *The August 1 off date instead of the current August 31 date was proposed by an interdisciplinary team of specialists to, not only allow for sufficient regrowth, but to avoid typical late season mechanical damage by cattle to riparian areas. Research and experience has shown that cattle tend to congregate to a far greater degree in riparian areas late in the summer that at any other time. Refer to the response to comment number 405.*

414 **COMMENT** We are concerned that the [KFRA] BLM is not fully considering the actual ground conditions of a particular locality within the Resource Management Area when establishing their AMP. There seems to currently be a greater tendency, on the part of the BLM staff, to macro-manage the resource area. This appears in the determination of turnout dates and closing dates. In the past users have been able to establish a working relationship that allowed a reasonable amount of flexibility in fitting particular turnout dates and occupancy periods to the conditions of a specific allotment.

RESPONSE *Refer to the response to comment number 405. A major aspect of the allotment evaluation process is working with the grazing permittee/lessee to accommodate their needs while still meeting our land management responsibilities. We fully expect our working relationships with permittees/lessees to continue and to allow for reasonable flexibility of operations.*

415 **COMMENT** A turnout date of April 15th is too early to achieve optimum seasonal grazing conditions. At our suggestion, about 18 years ago, that date was moved back to May 1st. Even this later date is often too early and after a drought period, such as the last several years, turning out this early can cause even greater problems.

RESPONSE *The Klamath Falls Resource Area will continue to work with permittee/lessee on all aspects of their grazing use. We realize turnout dates as well as off dates must be dynamic in order to account for seasonal and yearly fluctuations in conditions. See the response to comment number 405.*

416 **COMMENT** Season of Use, Under No Action [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The season of use 5/01-8/31 has 608 AUMs - P/A 4/15-8/01 has 508 AUMs; can the AUMs be correct for both time periods? I recommend No Action on the Dry Prairie allotment. One reason being the season of use works best for the base ranch and our operation.

RESPONSE *Refer to the response to comment number 405. The different season-of-use dates listed for the No Action and draft Preferred Alternative, while still maintaining the same 608 animal unit month figure, assumed that the number of livestock grazed may vary somewhat.*

417 **COMMENT** I would support a requirement for an allotment management plan for every allotment. This would begin a real process for better management and evaluation of existing uses and resource conditions. This would also begin to establish standards for monitoring.

RESPONSE *Allotment management Plans, or equivalent (for example, Coordinated Resource Management Plans), are to be prepared concurrent with or shortly after allotment monitoring evaluations. This process will begin on "I" category allotments, which are defined as areas that require and/or provide opportunities for a higher level of management. The evaluation/allotment management plan process will then be extended to "M" allotments and eventually in the future, to "C" allotments. Refer to the response to comment number 405 and Appendix L.*

418 **COMMENT** On page 4-10 [of the draft KFRA Resource Management Plan/Environmental Impact Statement], the document states that a mitigation measure employed in Alternatives C, D, E, and Preferred Alternative, establishes different seasons for livestock grazing, and in some cases, reduces the numbers of livestock. This implies that Alternatives No Action, A, and B do not establish different seasons for grazing. Yet, in Chapter 2 on page 2-24, this change in season-of-use mitigation measure is listed, along with several others, as being common to all alternatives. This is an apparent inconsistency. Which is correct?

RESPONSE *The No Action Alternative, by definition, does not establish a different season of use. You are correct, however, that the statement you quote from page 4-10 of the draft Resource Management Plan/Environmental Impact Statement may imply that the A and B alternatives do not propose different seasons of use, when in fact the alternatives do recommend such changes in many allotments. The sentence should have read, "In alternative C, D, E, and Preferred Alternative, the establishment of different seasons of livestock grazing use coupled with reductions in overall livestock numbers would have a positive effect on soil productivity." Alternatives A and B propose increases in grazing use and thus increased livestock numbers. The potential adjustments listed on page 2-24, which you refer to as mitigations, are possible actions allowed under current policy and regulations to rectify problems identified through rangeland monitoring studies. These management changes, as well as others deemed necessary and supportable, could be implemented regardless of which alternative is adopted, including the No Action Alternative.*

419 **COMMENT** Tables 2-1 and 4-51, on pages 2-983 and 4-115, respectively [of the draft KFRA Resource Management Plan/Environmental Impact Statement], indicate that different allotments have a higher or lower number of AUM's (Animal Unit Months), depending upon the alternative. However, this reader did not find any tables which summarized soil impacts according to the different alternatives. What are the differences in soil impacts from livestock grazing according to each alternative.

RESPONSE *Specific numbers by alternative, like those which can be calculated for grazing levels (AUMs), can not be determined for soil impacts. The best that can be estimated, appropriate for the broad scope of the Resource Management Plan, is what is found in Chapter 4 of the Proposed Resource Management Plan/Final Environmental Impact Statement.*

420 **COMMENT** Your [KFRA] Preferred Alternative for grazing calls for 13,185 AUMs. At $1.97 per AUM this brings in income of $25,974.45. This income comes from 212,000 acres, resulting in income per acre of 12.25 cents. The BLM's extensive efforts to restore riparian areas from the degradation caused by past and present grazing obviously costs many times the $26,000 of income from the entire land area. Hay at $60.00 per ton works out to be 3 cents per pound. Valuing forage at the same rate would require only 4 pounds of feed on each acre to make up that 12 cents per acre. If we purchased hay to feed those cattle it would cost 1/2 ton/AUM x 13,185 AUMs x $60.00/ton = $395,600. I would guess this to cost less than the present system. Please try to find a rational alternative to the present system.

RESPONSE *The current grazing management program within the BLM is based on regulations and policies stemming from a myriad of laws beginning with the 1934 Taylor Grazing Act. To change the current system entails congressional action and is beyond the scope of this plan.*

421 **COMMENT** However, we urge you to modify the [KFRA] Preferred Alternative in the following ways: Adjust livestock grazing to provide greater protection for riparian vegetation. We are less concerned here with number of AUM's than with how those cattle are managed. If cattle are carefully controlled as to season of use along streams, the AUM's in the Preferred Alternative are acceptable. But without adequate controls, even greatly reduced AUM's can severely damage riparian vegetation, water quality, and fish reproduction. These changes would provide greater protection for water quality, riparian zones, and fish reproduction. Not only are the modifications small enough to not impose undue economic hardship, we believe that, long term, they will provide economic benefits by protecting fish, water, and recreation.

RESPONSE *Refer to the draft Resource Management Plan/Environmental Impact Statement Appendix page 3-13 or Appendix P, which explain the Bureau's "Riparian-Wetland Initiative for the 1990s". This policy will guide implementation of the Klamath Falls Resource Area's grazing program relative to riparian area conditions. Also refer to the response to comment number 405. See also Appendix L.*

422 **COMMENT** The [KFRA] Preferred Alternative reduces the property right of grazing allotments and permits of private landowners on BLM public lands without the recognition of the "takings" aspect of this reduction or the need for compensation. This is done by recommending additional reduction in permits and animal numbers for public grazing.

RESPONSE *Takings Implication Assessments are required by Executive Order 12630 to assist federal agencies in evaluating actions which affect, or may affect, the use or value of private property. Private property refers to all property protected by the Just Compensation Clause of the Fifth Amendment to the Constitution. Grazing licenses and permits do not create any right, title, or interest in the public lands (43 U.S. Code 315b). The courts have therefore held that grazing licenses and permits may be revoked without payment of compensation for any element of value based upon the use of private lands in combination with the Government's permit lands - United States v. Fuller, 409 U.S. 488, 35 L.Ed.2d 16 (1973). In view of the fact that grazing licenses and permits, as well as associated elements of value in base properties, are not private property protected by the Just Compensation Clause, it is clear that Executive Order 12630 and the requirement for the preparation of Takings Implication Assessments are inapplicable to planning activities involving BLM grazing licenses and permits.*

423 **COMMENT** The draft [KFRA] plan does not adequately categorize conditions and future objectives.

RESPONSE *Appendix 2-H in the draft Klamath Falls Resource Area Resource Management Plan/ Environmental Impact Statement provides a comprehensive delineation of management objectives, by resource conflict/concern, for each allotment in the KFRA. It also lists the management category (M,I,C) for each allotment. The categorization process explicitly considers existing rangeland conditions as well as other criteria. Refer to Appendix L (Selective Management and Allotment Management Summaries sections) in the Proposed Resource Management Plan/Environmental Impact Statement.*

424 **COMMENT** The draft [KFRA] plan fails to make a reasoned evaluation of existing and future livestock grazing.

RESPONSE *The Resource Management Plan is designed to provide broad guidance to direct the efforts and priorities within the range management program, as well as all other programs. We believe the analysis of grazing activities is appropriate for the level of detail that an Resource Management Plan can address. Although we believe the proposed changes in grazing management are accurate, reasonable, and supportable, all changes in grazing use will be based on the results of an interdisciplinary allotment evaluation of rangeland monitoring studies. More specific details about the monitoring and evaluation processes are located in Appendix L (Rangeland Monitoring and Evaluation section) within the Proposed Resource Management Plan/Environmental Impact Statement. Also refer to the response to comment number 405.*

425 **COMMENT** The Plan and Preferred Alternative [of the KFRA] identify livestock management actions, problems, and resource conflicts but do not provide clear direction on how problems/conflicts will be solved.

RESPONSE *See pages 2-24 and 2-25 of the Draft KFRA Resource Management Plan/Environmental Impact Statement. In addition, more specific details about the monitoring and evaluation processes are located in the Proposed Resource Management Plan.*

426 **COMMENT** In Appendix 2-H [of the draft KFRA Resource Management Plan/Environmental Impact Statement], in allotments 102 and 107 only 100 and 50 AUM's respectively are allotted to wild horses, for a total of 150 AUM's. A herd of 50 horses would require 780 AUM's. Where are the horses getting this required needs? Under management objectives for allotments 102 and 107 should not the objectives for the wild horse herd been stated?

RESPONSE *The Pokegama Herd Management Area encompasses an area that is 20 percent BLM and 80 percent private lands. The 150 animal unit month estimate, listed in Appendix 2-H of the draft Resource Management Plan/Environmental Impact Statement and Appendix L of this plan, is based on the BLM portion of the Herd Management Area. The objectives for wild horses are listed in Chapter 2, Wild Horses section, of the Proposed Resource Management Plan/Environmental Impact Statement.*

427 **COMMENT** In the glossary [of the draft KFRA Resource Management Plan/Environmental Impact Statement], under Animal Unit Month's the equivalent use for horses, elk, deer, and antelope should have been given; also the number of months used to calculate animal unit month's in critical deer winter range.

RESPONSE *The AUM equivalents used for analysis during the planning process are as follows: 1 horse = 1.25 Animal Unit Months, 3 elk = 1 Animal Unit Month, 5 mule deer (east side) = 1 Animal Unit Month, 6 blacktail deer (west side) = 1 Animal Unit Month, and 7 antelope = 1 Animal Unit Month. These figures (with the exception of horses) were mutually agreed upon with the Oregon Department of Fish and Wildlife and have been added to the Proposed Resource Management Plan/Environmental Impact Statement.*

428 **COMMENT** Without equivalent use data and season of use for wildlife, the other forage demands (Animal Unit Month's) in Appendix 2-H [of the draft KFRA Resource Management Plan/Environmental Impact Statement] is virtually meaningless. For instance are the 1,681 animal unit months for deer in allotment 0101 for 12 months or does this herd move to a critical winter area in another allotment? Is any of the 1,681 animal unit month's allotted to deer, placed in a non-use category? Of the 95 allotments at least 25 have critical deer winter range, but animal unit month's allotted to big game can not be verified because of lack of herd sizes and season of use information. Also Table 2-H did not contain any information on forage production, on which to base allocations. I am sure production has been critical in the past 7 years of drought. How can allocations be determined without known production data?

RESPONSE *Refer to the response to comment number 405. The wildlife forage demands listed in Appendix 2-H, of the draft Resource Management Plan/Environmental Impact Statement, are based on Oregon Department of Fish and Wildlife estimates of wildlife use at the end of the ten year life of the plan. Specific information about numbers and season-of-use is available from the KFRA wildlife biologists or the Oregon Department of Fish and Wildlife.*

429 **COMMENT** The Preferred Alternative proposes to build only 41 miles of fence in the next 10 years; at 4 miles a year, or $12,000 a year, I think that's pretty minimal. All the proposed fences are in the Pokegama area; are you satisfied with the status quo in the Gerber block?

RESPONSE *Seven miles of fencing were listed in the draft Resource Management Plan/Environmental Impact Statement under the Preferred Alternative, for the Edge Creek (0102) and Dixie (0107) allotments, which are in the Pokegama area. There were ten miles of fence listed for various Gerber area allotments. Although much has been accomplished in the Gerber Block regarding rangeland enhancement, much is yet to do. Range improvement projects, including fencing, will play an important role in achieving future improvements. Some additional fencing has been added to the proposed Resource Management Plan/ Environmental Impact Statement, including what was inadvertently omitted in the draft.*

430 **COMMENT** The [KFRA] DEIS calls for maintenance of undisturbed conditions in special habitats, such as wetlands and meadows, but no fences are proposed, so exactly how do you expect to achieve this undisturbed condition? Many allotments lack management systems, even in the Gerber Riparian Demonstration Area, where considerable staff time has been spent. For example, the report for allotment #882 cites unsatisfactory range condition, unsatisfactory wetlands, riparian areas less than good, and water quality problems, yet no fence is proposed, not even a theoretical management solution suggested!

RESPONSE *Over 40 miles of fencing is proposed in the proposed resource management plan; much of which will be used for livestock control in riparian/wetland areas. In addition, the draft Preferred Alternative listed several specific riparian/aquatic/wetland areas to be fenced; see the draft Resource Management Plan/Environmental Impact Statement, Volume 1, page 2-63. In the Horsefly allotment (0882), extensive fencing has already been implemented; no further fence projects are envisioned at this time. A rest-rotation, "flash" grazing system is implemented now, that is improving both riparian/wetland and upland vegetative conditions. Although much has been accomplished on the Gerber area allotments, much has yet to be done. This is reflected by the improvement oriented objectives found in the Proposed Resource Management Plan for most Gerber allotments, including Horsefly. The allotment monitoring evaluation and/or activity planning processes will identify remaining problems and implement management changes to correct them.*

431 **COMMENT** Appendix 2-H [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. Livestock Grazing Allotments. Allotments 851, 876, 879, 882, 883, 884, 885, 886, 887, 888, 889, 890, 893 all appear to be in the range of, or within a drainage inhabited by, the listed suckers. Of these, only 3 cite Special status species and/or habitat exists within the allotment. The Final Resource Management Plan should acknowledge impacts of management of these allotments on listed species. Identified Resources Conflicts/Concerns are listed as follows: 5 cite Detrimental use - distribution problems occur in the allotment; 3 cite Range condition (livestock forage condition) unsatisfactory; 8 cite No grazing management system established in the allotment; 4 cite Physiological needs of key forage species are not being met; 4 cite Wetlands habitat in less than satisfactory condition; 10 cite Riparian or aquatic habitat is in less than good habitat condition; 8 cite Water quality may not currently meet Department of Environmental Quality water quality standards; and 1 cites Active erosion. This clearly documents that past grazing management practices have failed to provide for the needs of streams, riparian areas, and, most importantly, the listed species that depend on these resources. While the Management Objectives optimistically seek to solve these problems and conflicts, the Service questions whether a 5 percent reduction in animal unit month's in the Klamath Falls Resource Area will accomplish such goals.

RESPONSE *Refer to the response to comment number 405. The addition to the Pitchlog allotment (0887) of the statement under Conflicts/Concerns of "Special status species and/or habitat exists within the allotment", with the accompanying management objective, has been made. Allotments 882, 885, and 890 already have the "Special Status ..." statement listed, as you generally note. The remaining allotments listed are believed to be adequately addressed with the existing riparian/aquatic/wetland and water quality objectives, as none of the allotments are known to have special status species or potential habitat. Although much is yet to be accomplished, we believe that the management changes made to date have improved riparian/aquatic/wetland habitat conditions. As proposed in the plan, the reductions in animal unit months are made within seven allotments and amount to much more than 5 percent within those areas. Once the evaluations are completed on our priority allotments, the changes in management are expected to make significant improvements, where needed, in riparian/aquatic/wetland conditions and may include reductions in active use of more than 5 percent. See the Special Status Species section in the Proposed Resource Management Plan for additional clarification.*

432 **COMMENT** Like cover, [the KFRA] BLM draft plans indicate marginal current conditions in most of the emphasis areas/analytical watersheds. Lack of forage or poor forage quality has led to deer and elk migrating onto private lands thus leading to land use conflicts. The Klamath Falls Resource Area, should structure grazing allotment plans to mitigate forage conflicts that may arise between livestock and big game. Alternatives such as shortening livestock grazing periods in the fall to allow green-up for winter forage may be helpful in defusing forage problems.

RESPONSE *See response to comment number 405. Concurrently with or shortly after the allotment evaluation process, activity plans, or their equivalent, will be prepared. Both the evaluation and activity planning processes will take into consideration the needs, concerns, and objective for wildlife, including big game.*

433 **COMMENT** There seems to be a large number of allotments which lack comprehensive allotment management plans. Without a plan for each allotment, combined with an aggressive monitoring program, how can the Klamath Falls Resource Area hope to improve unsatisfactory conditions in allotments currently needing rehabilitation? Will allotments identified as (I) in the plan become high priority for improvements when funding is available? While the core team approach used to identify resource conflicts in allotments is a good start, it should not be considered a substitute for allotment managements plans.

RESPONSE *Refer to the response to comment number 405. Also, see Appendix L of the Proposed Resource Management Plan, Rangeland Monitoring and Evaluation section, for an explanation of monitoring being done in the Klamath Falls Resource Area. Be aware that even in the absence of allotment specific plans on many priority allotments, specific grazing management and intensive rangeland monitoring can and is taking place.*

Land Tenure

434 **COMMENT** Coordinate with adjoining districts regarding land tenure decisions.

RESPONSE *This coordination has been accomplished.*

435 **COMMENT** State the BLM's responsibility to accommodate the State's 5,202.29 acres of in lieu land entitlement with public domain land.

RESPONSE *This has been added to Chapter 3, Lands.*

436 **COMMENT** The geographic information system used by the BLM should also be used to identify areas of non-federal land that, if acquired by the federal government, will facilitate ecosystem management.

RESPONSE *The BLM's geographic information system for western Oregon includes only limited resource data (hydrography) on the intermingled lands. Acquiring the data necessary to explore such a question comprehensively would cost millions of dollars and take several years.*

437 **COMMENT** If land should be considered for disposal, the Confederated Tribes should have the opportunity to acquire it, either by transfer to the BIA or other means.

RESPONSE *Current legislative authority makes no provision for such a preference for Indian tribes. Most lands considered for disposal would only be exchanged for other lands, however.*

438 **COMMENT** Acknowledge existing or potential State ownership claims on navigable waterways.

RESPONSE *This has been added to Chapter 3, Lands.*

439 **COMMENT** Blocking ownership makes good management sense. However, I think that the current practice under which the State of Oregon negotiates, requiring the State to hold mineral rights even when swapping the surface rights, makes for very bad management. At some point in the future, if minerals are discovered, the question of access will come up. Other management issues will arise. I would encourage the BLM to avoid "split estates" and to block both surface and subsurface rights.

RESPONSE *The generally preferred rule is for both surface and subsurface (mineral) estates to be traded during an exchange. However, due to third party encumbrances, or difficulties in the valuation process, it may be preferable to complete certain exchanges with reservations. Such exception to the general rule are made on a case-by-case basis.*

440 **COMMENT** Inconsistencies with the [Klamath] County's Interim Land Use Plan. Land Disposition Policy: The County's policy is that federal agencies not acquire private land or land rights without ensuring parity in land ownership is maintained and land use goals of the County are maintained. The BLM has announced, informally, its intent to acquire, as a part of the Resource Management Plan, a large land block near Agency Lake, but has provided no information on the plans, no analysis of the effects of such acquisition, and no evaluation of the consistency of such acquisition with the County's plan. Federally managed lands that are difficult to manage or lie in isolated tracts are to be targeted for disposal. I see no evidence in the Resource Management Plan or Environmental Impact Statement of the BLM having assessed lands that could be so targeted for disposal.

RESPONSE *Inconsistencies with other agency/government plans are identified in Appendix X. Refer to that appendix for more information on the consistency of the Proposed Resource Management Plan with the County's Land Use Plan.*

The Upper Klamath Basin Resource Management Plan and Environmental Impact Statement was prepared separately in response to the acquisition of the Wood River property and to resolve issues pertaining to the management of that and other properties in the upper Klamath Basin. Lands that are being targeted for disposal were determined to be suitable for disposal in the Lost River Management Framework Plan, amended March 1989. Appendix M, Zone 3 lands targeted for disposal, lists lands that could be disposed of to compensate Klamath County for tax revenue losses.

441 **COMMENT** Although the [KFRA] Resource Management Plan includes general direction concerning acquisition of lands in Wild & Scenic corridors (Resource Management Plan II, pg. 2-79), there is no specific mention of the need to acquire private inholdings in the Upper Klamath Wild & Scenic corridor. A specific acquisition plan should be included in the Resource Management Plan which proposes the acquisition of fee title and/or easements on private lands in the river corridor through willing seller purchase or exchange.

RESPONSE *Private lands within the Klamath River canyon are assumed to be suitable for acquisition by purchase or exchange, pending site-specific environmental analysis because they are enclosed within the land tenure Zone 1 boundary. Fee purchase of those lands would require special Congressional legislation and funding.*

Access

442 **COMMENT** Identify how much access BLM provides to intermingled landowners through agreements and easements.

RESPONSE *Some 90 percent of intermingled forest land has rights of access for forest management purposes, under the terms of agreements and easements with BLM.*

Roads

443 **COMMENT** Develop a comprehensive road management plan.

RESPONSE *Such plans will follow completion of the Resource Management Plan. Transportation management objectives will be developed for all roads.*

444 **COMMENT** Coordinate with adjacent landowners and others in the development and implementation of a comprehensive road management program.

RESPONSE *We recognize the importance of coordination with intermingled landowners and other road users. Reciprocal right-of-way agreements require coordination with the intermingled landowners and road users that are parties to them.*

445 **COMMENT** Outline how the BLM will cooperate with other landowners to build the permanent road system and accomplish road management objectives.

RESPONSE *Most of the permanent road system already exists. Cooperation with other landowners is an integral part of road development planning and the development of transportation management objectives.*

446 **COMMENT** Clarify how administrative road closure and obliterating them relate to specific issues and objectives. Address maintenance of roads administratively closed. Also address road maintenance priorities if funding is not adequate.

RESPONSE *Road closures are driven by issues and objectives for protection of other resources, such as wildlife. If roads are to be retained for future management but closed to public use, most closures would be accomplished by gates, allowing access for maintenance. Transportation management objectives in transportation management plans will address maintenance priorities.*

447 **COMMENT** Explain how the proposed road density objective will be achieved in light of the contention that partial cut systems often require greater road densities than clearcut systems.

RESPONSE *Some additional roads will be temporary and will be revegetated. Some existing local and collector roads will also be closed to help meet this objective and use of aerial logging systems will increase.*

448 **COMMENT** Develop a methodology for prioritizing those roads the BLM is planning to build, as well as for prioritizing road closure and restoration.

RESPONSE *Transportation management objectives will address such prioritization.*

449 **COMMENT** The draft [KFRA] Resource Management Plan/Environmental Impact Statement indicates that open road densities would be limited to 1.5 miles per square mile" (page xiii) and that "[New timber harvest roads would be kept to the minimum necessary for management." (page S-8) Two concerns arise related to this management direction. First, the draft Resource Management Plan/Environmental Impact Statement calls for the use of an interdisciplinary process to develop the overall transportation systems and the establishment of road management objectives. However, it does not address cooperation with other landowners. The final Resource Management Plan/Environmental Impact Statement should outline how the BLM will coordinate and cooperate with adjacent and intermingled landowners in order to plan, build, and maintain the permanent road system and accomplish road management objectives. Second, the draft Resource Management Plan/Environmental Impact Statement mentions road closures in a number of contexts throughout the document in conjunction with various management objectives. The term "closed" appears to be used in two way in the draft Resource Management Plan/Environmental Impact Statement; it can mean either administratively closed (using such means as gates or other barriers) or obliterated (restored to the natural land contour and vegetation). Since both the economic costs and environmental costs of the two methods of closure may differ substantially, the final Resource Management Plan/Environmental Impact Statement should clarify which method of closure is appropriate related to specific issues and objectives. In those cases in which the road will remain on the permanent transportation system but in which road use will be restricted by an administrative closure, the final Resource Management Plan/Environmental Impact Statement should address non-traffic-generated maintenance needs that will ensure that culverts remain unobstructed and ditches are cleaned in order to prevent road "blow outs" during winter storms. In addition, the document should address road maintenance priorities that can guide decision making when funding is not adequate for complete road system maintenance.

RESPONSE *Refer to the response to comments numbers 444 and 445. The road density goal of 1.5 miles per square mile is recommended by Oregon Department of Fish and Wildlife. This is a goal to reach, but will not be feasible in all areas. Any road closures dealing with private timber companies will be done in a cooperative effort. The type of closure depends upon road length, surface type, and road* *prism (outslope, inslope, ditched with culverts). Road closures with cross drainage culverts will be investigated to determine if water dips or water bars could be substituted. In most cases the Klamath Falls Resource Area has no problem with road drainage except for flash flooding. Also the roads have gentle grades, small amount of annual precipitation, snow during winter months, and very few full bench roads. Some of the maintenance priorities are determined by flash flooding damage, safety, and maintenance level. Maintenance level 1 being lowest and level 5 the highest.*

450 **COMMENT** What standard of roads would be built during construction shown in Table 4-1 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]? Under all alternatives one mile of new road would cover approximately 10.9 acres, with an average width of 90 feet between toe of fill and top of cut. This seems excessive, considering the statement on page 4-14, under Water Quality and Roads: "The major portion of the transportation system in the planning area has been completed with most of the roads located on gentle slopes." A 32 foot road built on a 35 percent sideslope would have a constructed width of approximately 75 feet, with 1 1/2:1 cut and fill slopes. Please explain the need for 90 foot widths, or verify the acres shown in Table 4-1?

RESPONSE *The direction of BLM's state office is to use a state wide average of 90 foot road width. However, in the Klamath Falls Resource Area the actual road width would be less than the average due to the gentler terrain. This works out to a 60 foot wide average rather than the 90 foot statewide average.*

451 **COMMENT** [We] support transportation of logs and manufactured forest products over federal roads within the County. The [KFRA] BLM's plan to reduce vehicular traffic on certain federal roads appears counter to this policy, and there is no apparent evaluation in the draft Environmental Impact Statement of the cumulative effect of the road closures on forest products transportation.

RESPONSE *Primary roads, such as Keno Road, Burton Flat Road, or Spencer Creek Tie Road, are not proposed for closure. All roads proposed for closure are lower-haul-volume secondary roads. Closure would be done to protect wildlife or to protect the road itself in the case of dirt road closure during winter and spring months. Since most closures would be made by installation of gates or barricades, the roads themselves remain in place, and would not be abandoned. The roads would be available for administrative use, including transportation of logs and forest products, but seasonal restrictions to protect nesting eagles, deer, and other resources, may limit such use. The BLM works closely with private industry through right-of-way agreements to minimize or eliminate the effects road closures might have on forest products transportation.*

Fire

452 **COMMENT** Consider letting naturally caused fires burn, while protecting life and property.

RESPONSE *Most naturally caused fires in the resource area occur during times when the fire risk (thus, danger to life and property) is high. Among the "property" at stake are timber and residences on intermingled private land. Therefore, it would rarely be appropriate to let a fire burn, except where prescribed fire and vegetation management objectives would be met.*

453 **COMMENT** In many forms, slash disposal contributes to global warming, and it consumes the forests capital reserves. Consider letting naturally caused fires burn, while protecting life and property. Consider prescribed burns.

RESPONSE *We've made every effort to use unmerchantable, harvested material that is in excess of what is figured to be needed for down logs and site protection. The chip market oscillates greatly and* *utilization is sporadic. The reduction of the probable sale quantity will reduce the amount residue that is subjected to burning after harvest.*

The use of prescribed fire by artificial ignition, particularly underburning, to mimic the pre-settlement fire regimes and fire ecology only allows the user to pick times when air quality and weather allow for success. Most areas within the Klamath Falls planning area have an accumulation of fuels as a result of seventy years of fire suppression. The intrusion of large populations into the rural interface areas compounds this problem. No fires are allowed to burn without a detailed plan that specifies the conditions and contingencies required for success, hence there are also prescribed fires started by natural ignition. Prescribed natural fire is included in the Proposed Resource Management Plan, but only after certain conditions are meet.

454 **COMMENT** p. 3-26, 2nd column, 1st paragraph [of the draft KFRA Resource Management Plan/ Environmental Impact Statement]. The statement about the historic frequency of fires in the area needs to be referenced, as it is important in evaluating the proposed vegetation management plans and other activities.

RESPONSE *There is a wide variety of sources for the cited fire frequencies. Some of the works have been around for a long time, while others are more recent. See Bork 1985, Stokes and Dieterich 1980, Martin 1982, and Keen 1937 in the References Cited section. Other references are available upon request at the resource area office.*

Socioeconomic Conditions

455 **COMMENT** Assess the forest-wide economic efficiency of the new plans.

RESPONSE *Assessing such efficiency would require placing dollar values on a variety of ecosystem management benefits which we do not believe can be effectively quantified on an equal economic standard with commercial product (for example, timber) benefits. Ecosystem considerations are more appropriately assessed on their qualitative merits.*

456 **COMMENT** Assess the economic efficiency of stand management prescriptions, including a comprehensive look at wood quality and value.

RESPONSE *Since stand management prescriptions are driven substantially by ecosystem management concerns, we do not consider economic efficiency analysis very relevant.*

457 **COMMENT** Update economic data to reflect more current information.

RESPONSE *Additional and more recent employment, personal income, and county revenue information has been added to the final Environmental Impact Statement. Although the official baseline (1984-1988) remains unchanged, the added information allows absolute and relative comparison of the alternatives and their impacts.*

458 **COMMENT** The BLM should include an analysis of statewide impacts of the alternatives and proposed action in the final Resource Management Plan/Environmental Impact Statement.

RESPONSE *An additional layer of analysis has been added to analyze the western Oregon impacts of BLM alternatives and the Proposed Resource Management Plan.*

459 **COMMENT** The BLM has not considered the impacts of Measure 5 in it's planning process.

RESPONSE *A discussion of Ballot Measure 5 and the constraints it places on local government revenues has been added. This discussion recognizes that ballot Measure 5 is part of the economic environment in which BLM decisions are made.*

460 **COMMENT** The BLM has failed to identify viable mitigation measures for the "very real and severe" social and economic impacts associated with the alternatives. Consider compensating adversely impacted citizens, maintaining/increasing county revenues, and provision of social and economic development programs that tap the spirit of rural people, to mitigate social and economic impacts.

RESPONSE *The BLM has neither the authority nor ability to provide compensation, social services, or other economic assistance to impacted counties, businesses, or individuals. Such proposals are beyond the scope of the Resource Management Plan, but they are addressed in Chapter 7 of the Forest Ecosystem Management Assessment Team report, and the Economic and Community Assistance Program discussion in Chapters 4 of the Supplemental Environmental Impact Statement.*

461 **COMMENT** Since 1953 the Oregon and California counties have relinquished one third of their statutory entitlement. These foregone county monies were "invested" by the counties with the expectation they would receive a "return" on their investment through increased harvest levels in future decades. Nearly one billion of otherwise county revenue has been so appropriated since 1953.

RESPONSE *The 25 percent plowback by the Oregon and California counties between 1953 and 1981 was used to increase management intensity of the Oregon and California lands. Although many expenditures, such as road building and reforestation, were made with additional future use and harvest in mind, these activities also enabled immediate access to and harvest of timber otherwise inaccessible. This resulted in increasing levels of sustainable harvest being identified throughout this period, as well as increasing timber receipt collections.*

462 **COMMENT** School programs will be cut as revenue declines from diminished Oregon and California receipts.

RESPONSE *Unlike county revenues from the national forests which must be used to fund schools (25 percent) and roads (75 percent) Oregon and California payments enter directly into the county general fund. Distribution of these general fund monies is discretionary. All counties in western Oregon have at some time transferred monies from the general fund to the local school districts or Educational Service District . Most counties continue to make these transfers annually. It is through these transfers that changing Oregon and California payments to the counties could impact school funding. An analysis conducted in 1988 concluded that Oregon and California funds appear to contribute between 0 and 2.75 percent of school funds. (Hackworth, Kevin. 1988.* Importance of Timber-Related Revenues to Local Governments in Oregon and the Effects of Forests in Oregon on Property Tax Rates. *Masters Thesis Submitted to Oregon State University.)*

Distribution of county general fund monies to the schools could change dramatically from past distribution patterns due to reductions in national forest payments to counties and the implementation of Ballot Measure 5.

463 **COMMENT** BLM should "support"/"endorse" federal and state loans and grants to encourage local businesses to invest in the equipment for milling smaller logs.

RESPONSE *Discussion of potential legislative agendas is beyond the scope of the Resource Management Plan/Environmental Impact Statement.*

464 **COMMENT** Revaluate the impacts to total employment of harvest reductions.

RESPONSE *Different models representing different employment and income multipliers were used to assess BLM and cumulative impacts. Although this appears inconsistent, we felt the different type of analysis conducted required the use of different models, thus multipliers. The analysis of BLM actions was conducted as a marginal analysis, examining only the actions of the BLM. For these analyses BLMPACT was used. The western Oregon cumulative effects analysis examined BLM actions together with assumed management actions of the U.S. Forest Service, State, and private forests. For this analysis subregion multipliers cited in the Supplemental Environmental Impact Statement were used. Unlike the multipliers used in the draft Resource Management Plan/Environmental Impact Statement these multipliers only examine impacts within the timber industry, including self-employment.*

465 **COMMENT** An alternative which emphasized recreation opportunities could have served as a benchmark from which to compare jobs gained from the various alternatives presented in the plans.

RESPONSE *Using information available in Hospodarsky (1989) the BLM projected future recreation demands (year 2000) expected on BLM-administered lands. This identified demand was assumed to represent the maximum recreation potential of these lands. No alternative was developed specifically to address meeting the maximum recreation potential of BLM-administered lands. However, based on the expected provision of recreation opportunities under each alternative, we determined what level of potential demand could be met. See Table 4-36, Anticipated Short-Term Capability of BLM Administered Facilities and Resources to Meet Projected Recreational Demand for 11 Major Use Categories by Alternative. Designing and analyzing specific plan alternatives merely to provide benchmarks for comparative analysis would make the Resource Management Plan/Environmental Impact Statement unwieldy.*

466 **COMMENT** Provide the analytical ground work for an effective policy response to the fundamental social and economic changes which would follow the implementation of the preferred alternative.

RESPONSE *This is outside the reach of the BLM's statutory mission and beyond the scope of the Resource Management Plan/Environmental Impact Statement. Chapter 4 of the Supplemental Environmental Impact Statement has addressed this, however, in its Economic and Community Assistance Program discussion.*

467 **COMMENT** Promote restorative work for ex-loggers.

RESPONSE *Labor intensive management activities, including restorative work, that have been incorporated into the Proposed Resource Management Plan, will provide additional employment opportunities in the local economy. The level of employment identified cannot fully replace employment losses caused by reduced harvest levels. In addition, the BLM has no authority to assure that those employed in such work are ex-loggers or former workers of a specific industry.*

468 **COMMENT** The BLM has not examined the national and international impacts of reduced lumber and wood products production in the Pacific Northwest. Identified areas of impact include:

- Economic & environmental impacts of using substitute building materials
- Housing cost impacts
- Changing import/export flows (especially from developing countries)
- Economic and environmental impacts of harvesting timber elsewhere in the world

RESPONSE *A generalized discussion of the national and international impacts of using substitute building materials and fiber sources has been added using information from recent publications. These studies examine the range of resource substitution impacts individually. The extent and rate at which these effects will combine in response to reduce Pacific Northwest timber harvests is unknown.*

469 **COMMENT** Add export base analysis.

RESPONSE *Attempting to do an export base analysis for western Oregon communities would entail making substantial assumptions about the "export" content of incomes in many sectors of the economy of each community. The results would not contribute substantial new knowledge about which communities are sensitive to "export" markets. Sensitivity of communities to changes in "exports" has been identified through numerous sources including: (1) Oregon Legislature, Joint Legislative Committee on Land Use,* Dependent Communities Desktop Analysis *(1990); and Oregon Economic Development Department,* Oregon's Coordinated Timber Response Program *(Updated 1993).*

470 **COMMENT** The BLM failed to identify the importance of changes in the natural environment and amenity values (scenic beauty, clean water and air, recreation resources) in attracting businesses and retirees to western Oregon.

RESPONSE *Those changes would be long term, not within the ten-year time frame of our socioeconomic analysis. Additional discussion has been added, however, to Chapter 4, Socioeconomic Conditions. Quantitative analysis and comparisons were not made for these amenity values.*

471 **COMMENT** An economic analysis of the benefits and costs of a "Holistic Natural Watershed Management Plan" alternative, compared to the alternatives, should be made. Include greatly increased commercial and sport fishery benefits.

RESPONSE *The Supplemental Environmental Impact Statement addressed such an alternative in its Alternative 1. The comparative economic benefits of such an alternative would occur many decades in the future. Full recovery of fish habitat, for example, is not expected for 200 years under any alternative. The cost of heavily protective alternatives, however, in lost revenues, employment and local income, would be immediate. Economic analysis, with traditional discount rates for future benefits, would attach little current value to any such long-term benefits.*

472 **COMMENT** Identify other forest industries which are becoming significant contributors to the local economy, such as special forest products. Identify industry potential.

RESPONSE *The types and value of special forest products sold from BLM-administered lands have been identified. See Chapter 3. The economic impacts of the these sales have not been examined due to lack of information on which to base estimates or projections of employment and personal income.*

473 **COMMENT** Projected high stumpage prices (are unlikely to persist) (will increase substantially more).

RESPONSE *As shown in Table 4-48 of the draft plan, projected future prices are lower than current prices. Upon implementation of the Proposed Resource Management Plan and the assumed resumption of timber sales on the national forests, prices are expected to decline from the high levels associated with the current federal timber supply crisis. Less federal timber will be available in the future compared to the 1984-1988 baseline period, thus higher prices can reasonably be expected.*

474 **COMMENT** Use appropriate models to measure social impacts and systematically analyze them.

RESPONSE *No models were used to measure or analyze social impacts in the Proposed Resource Management Plan/Final Environmental Impact Statement. However, several recent publications, not available at the time of the draft, were used to enhance the discussion to social impacts. These publications generally relied on surveys, focus groups, and interviews to assess impacts. No models were developed or used.*

475 **COMMENT** Add demographic and occupational profiles of communities.

RESPONSE *This type of data is not readily available for all communities potentially impacted by the BLM management alternatives. A profile of "at risk" communities was developed by the Forest Ecosystem Management Assessment Team and is discussed. This profile contains demographic, occupational, and other characteristics.*

476 **COMMENT** Add an occupational profile of displaced workers.

RESPONSE *This information was provided by the Oregon Employment Division. Because of the wealth of information and length of the report only a few points could be highlighted in our Proposed Resource Management Plan/Final Environmental Impact Statement. A full reference was provided for those wishing to request the information from the Oregon Employment Division.*

477 **COMMENT** Describe the linkage and dependency (social, economic, spiritual) of local and regional communities, groups, industries, etc. on ecosystems within each land allocation.

RESPONSE *Social and economic analyses were conducted for each alternative, representing a complete set of allocations. Individual allocations were not examined. Spiritual dependency and linkages to BLM lands are, with the exception of traditional tribal use areas, individual in nature. The Resource Management Plan/Environmental Impact Statement was unable to comprehensively address these linkages to ecosystems due to the lack of information.*

478 **COMMENT** Disclose the economic impacts of ground-disturbing activities on the mushroom harvesting industry.

RESPONSE *Although qualitative information regarding the ecological impacts of ground disturbing activities exists for most plant species (see revised Chapter 4, Vegetation), quantitative information for many is not available. The economic impacts of ground disturbing activities for any given mushroom species could only be defined on a site and time-specific basis. Therefore, it is not possible to identify any general economic impacts at this time.*

479 **COMMENT** The Preferred Alternative for the Klamath Falls Resource Area is going to reduce harvest levels by over 75 percent. A preferred land use management plan for the Klamath Falls Resource Area will cut county revenues by $1.7 million dollars and mean the loss of 145 jobs that earn 42 percent more income per year than the average job. This county depends on revenues generated from timber receipts to maintain its roads, and fund its many schools. This draft Resource Management Plan goes far beyond the goals and objectives for which Congress created the Oregon and California lands and is nothing more than a spotted owl plan. In the wake of Measure 5, local governments cannot afford reduced revenues. Who will pay for all the social service needs with increased unemployment caused by your proposed reduction in the timber sale levels?

RESPONSE *In the decision making process, providing a sustainable level of timber production to meet the mandate of the Oregon and California Act while complying with other laws was an important factor. Timber production was not subsidiary in that process although the mechanical allowable sale quantity calculation hierarchy make it appear so.*

A discussion of Ballot Measure 5 and the constraints it places on local government revenues has been added. This discussion recognizes that Ballot Measure 5 is part of the economic environment in which BLM decisions will be made, and must be considered when assessing impacts.

How increased social service demands projected under several alternatives will be met is beyond the scope of the Proposed Resource Management Plan/Final Environmental Impact Statement. However, several actions, including labor intensive restoration work, have been identified as opportunities to increase employment opportunities in western Oregon.

480 **COMMENT** Preliminary research indicates that employment related to the forest products industry in Klamath County exceeds the state average of 18.42 jobs (direct, indirect and induces) per million board feet of harvest. This is mostly due to the additional secondary manufacturing and value added processing of local industry. We discovered that the labor used in several of the secondary manufacturing processes requires 3 times as many man hours per board foot as does primary manufacturing. Locally, the difference between the ASQ of alternative "A: and the ASQ of the preferred alternative could adversely impact 126 direct and indirect jobs and another 47 induced jobs (4.99 induced jobs per million board feet is the state average per U.S. Forest Service Region 6, March 1991). In Klamath County the average household has 2.54 members, so over 400 people could be adversely impacted with loss of wages, health insurance, retirement and other benefits of family supporting employment. The products produced are also important to the national economy. There would be approximately $6,000,000 less in basic forest products (lumber plywood, chips, etc.). yielded by the ASQ of the preferred alternative than by the ASQ of alternative "A". It is estimated that the value of forest products increase by factors of 4 to 6 (on the average) from the time they leave mills as basic products. This means that the difference in total economic impact between the timber yield of the preferred alternative and alternative "A" would be in the neighbor hood of $24 million to $36 million. Nearly all of the economic benefit from "added value" went to people outside the local area. I see no justification for the drastic drop in ASQ offered by the draft preferred alternative. The 10.27 mmcf yield capacity of this alternative only averages a yield of 153 bd ft per acre per year and is about 1/2 of the typical yield from lands suitable for timber production in the Klamath Falls Resource Area.

RESPONSE *Refer to the response to comment number 27. Additional discussion has been added regarding the range of multipliers used in recent publications. No changes were made to the multipliers used by the BLMPACT model. Discussion of economic and social impacts has been expanded to include family and household impacts.*

481 **COMMENT** A U.S. Forest Service study determined that each one million board feet cut employs 9.19 people, who in turn support another 9.23 people in their respective communities. The [Klamath] county tax rolls could lose 3 million dollars under the Preferred Alternative versus the historical ASQ, with a total economic impact of minus 37 million dollars. (See enclosed worksheet.)

RESPONSE *Additional discussion has been added regarding the range of multipliers used in recent publications. No changes were made to the multipliers used by the BLMPACT model.*

482 **COMMENT** It is [Klamath] County policy that prior to federal land agencies changing land use, impact studies on uses be conducted and mitigation measures be adopted in coordination with the County. No such coordination has occurred and no mitigation measures for loss of tax revenue, loss of employment, nor loss of economic activity have been developed in the documents that have been release to the public.

RESPONSE *Mitigation has been addressed by the Supplemental Environmental Impact Statement and Presidential budget initiatives. Inconsistencies with other agency/governmental plans are identified in Appendix X. Refer to that appendix for more information on the consistency of the Proposed Resource Management Plan with the County's land use plan.*

483 **COMMENT** It is obvious that the [KFRA] BLM has either not assessed the economic impacts of the "Preferred Plans", or that it has chosen to ignore the obvious negative impacts: Tripling the number of riparian management acres to over 200,000 acres.

RESPONSE *Reductions in acres available for timber production resulting from increases in riparian areas was included in the probable sale quantity calculations. Refer to Chapter 4, Effects on Socioeconomic Conditions, of this Resource Management Plan/Environmental Impact Statement.*

484 **COMMENT** [We] feel that the [KFRA] Resource Management Plan/Environmental Impact Statement is inadequate in its approach to evaluating the serious socioeconomic consequences of the restrictive land use policies in its Preferred Alternative. While the Resource Management Plan/Environmental Impact Statement offers an assessment of the socioeconomic impacts on its five alternatives (Alternatives A-E), it has not completed an economic evaluation of the impacts of its various alternatives prior to selection of a Preferred Alternative. A detailed economic impact evaluation of all alternatives should be completed, adequate descriptions prepared, and public comment requested on those impacts as part of the BLM's overall assessment prior to the selection of a Preferred Alternative. Currently, the BLM proposes that increased recreational development and local tax increases can somehow moderate the effects of their restrictive land use policy. We are unsure how the BLM arrives at this conclusion since there is no projected increase for recreation related jobs over the ten year planning period in the Resource Management Plan/Environmental Impact Statement. At the same time, approximately 150 timber related jobs are projected to be lost in the Klamath Falls Resource Area in addition to those already being lost from the direct effects of restrictions in timber harvest due to spotted owl habitat.

RESPONSE *The social and economic impacts of each alternative have been analyzed using the same tools and methodologies. Impacts of each alternative has been disclosed as required by National Environmental Policy Act. Under National Environmental Policy Act a primary purpose of the draft Environmental Impact Statement is to provide for public comment before a decision is made. Identification of a Preferred Alternative in the draft is expected.*

Additional clarification of historic and future recreation demand has been added. The BLM has identified additional recreation demand in the future. The BLM will be unable to meet all of the future demand given our existing land base and resources. Additional recreation developments under some alternatives will increase BLM's ability to meet demand, however some recreation demand will remain unmet. This unmet demand represents a potential for development for other parties in the county.

485 **COMMENT** We don't think there was any consideration taken on the economic impact on permit holders. For example, cows on poor feed will not breed back as soon as cows on good feed, costing us thousands of dollars. This does not take into consideration the cost of reorganizing our home base to accommodate cattle coming home a month early, during peak haying season.

RESPONSE *Appendix 4-G in the draft KFRA Resource Management Plan/Environmental Impact Statement contains an economic analysis of the impacts of foreseeable changes stemming from implementation of the plan. See the response to comment numbers 405 and 414. The appendix was not reprinted, but the analysis it contains is still valid.*

486 **COMMENT** In Appendix Table 4-G-3 [of the draft KFRA Resource Management Plan/Environmental Impact Statement] the estimated sales per cow value of $314.20 is in error, as the total sale value was divided by 350, while only 299 animals were sold for $109,971.00. The estimated sales per cow should have been $376.80. The error in Table 4-G-3 was carried into Table 4-G-4.

RESPONSE *The impact analysis is based on changing herd size. Thus dividing the value of products sold by the herd size (350) is appropriate to determine the average value of sales per cow grazed on public lands.*

487 **COMMENT** The timber output in the Preferred Alternative in the August 1992 draft of the Klamath Falls Resource Area indicates the highest percentage reduction in the state. Much of this is due to single purpose and restrictive designations of lands that is contrary to the desires and needs of the citizens of Klamath County. Preliminary analysis by our Local Resource Control Task Force indicates that the reduction in timber output from Alternative "A" or "B" to the "Preferred Alternative" will cost the community between 153 and 173 jobs (direct, indirect, and induced). The average household in Klamath County has 2.54 members - the total impact could be from 40 to 440 family members losing their means of support.

RESPONSE *Discussion of economic and social impacts has been expanded to include household and family impacts.*

488 **COMMENT** It is obvious that the BLM has either not assessed the economic impacts of the "Preferred Plans", or that it has chosen to ignore the obvious negative impacts: Elimination of over 6,000 timber dependent jobs.

RESPONSE *The social and economic impacts of the Proposed Resource Management Plan have been analyzed using the same tools and methodologies used for all alternatives. Impacts of each alternative have been disclosed for each alternative as required by the National Environmental Policy Act.*

489 **COMMENT** [We] object to the approach taken by the BLM in evaluating the negative socioeconomic impacts of its Preferred Alternative. According to the [KFRA] Resource Management Plan/Environmental Impact Statement, the reduced timber management programs are expected to support approximately 40 jobs during the life of the plan (ten years). This is approximately 130 jobs less than the average supported in the 1984-88 base period. The BLM offers no serious mitigation plans for this substantial job loss and the resultant adverse consequences on community stability. The BLM attempts broader direction toward recreational activities but in its analysis it does not identify any additional jobs supported through this recreational approach than were available in 1984 through 1988.

The BLM offers two apparent sources of mitigation for the decline in revenues associated with the loss of timber management and local jobs. The BLM is apparently unaware of or unwilling to address the tax limitations established in the State of Oregon through Ballot Measure 5. These approaches are insufficient, inadequate, and largely unimplentable as mitigation measures.

RESPONSE *Mitigation for timber-related job losses is addressed in the Supplemental Environmental Impact Statement. Additional clarification of historic and future recreation demand has been added. The BLM has identified additional recreation demand in the future. The BLM will be unable to meet all of the future demand given our existing land base and resources. Additional recreation developments under some alternatives will increase BLM's ability to meet demand, however some will remain unmet. This unmet demand represents a potential for development for other parties in the county. See Comment/ Response Number 53.*

A discussion of Ballot Measure 5 and the constraints it places on local government revenues has been added. This discussion recognizes that Ballot Measure 5 is part of the economic environment in which BLM decisions will be made, and must be considered when assessing impacts.

490 **COMMENT** The socioeconomic analysis concludes that the reductions in timber harvest associated with the PA would be expected to result in significant reductions in employment and income in the affected area. The Klamath Falls draft Resource Management Plan/Environmental Impact Statement provides a somewhat more complete picture in that it provides an estimate of the statewide effects of the BLM and Forest Service land management alternatives. We would also recommend the analysis be expanded to include more information on other sectors of the economy.

RESPONSE *The impact analysis has been changed to include a variety of general economic sectors. In addition, all actions have been integrated into a single analysis for each alternative.*

491 **COMMENT** The final Resource Management Plan/EISs could be improved if the degree to which the economic activities on BLM managed lands are likely to be economically self-supporting was addressed. A quantitative analysis of each "revenue and cost" stream would allow the audience of the Resource Management Plan/Environmental Impact Statement to understand the magnitude of the subsidies involved and to determine whether continuing these subsidies would be good public policy. In addition to timber harvest revenues, this analysis should include such items as grazing fees and mineral royalties.

RESPONSE *We believe a discussion that encompasses levels of personal income, employment, and county revenue together with non-market enhancements better describes the impact of implementing the objectives identified in each alternative rather than a strict commodity based benefit/cost analysis. We have tried to provide this type of discussion in the Proposed Resource Management Plan/Final Environmental Impact Statement.*

492 **COMMENT** The current analysis appears to be a static analysis; it implicitly assumes that other sectors of the economy do not change over the analysis period and thus shows the potential effects of the BLM and Forest Service activity in isolation from the rest of the economy. The analysis would be substantially more useful if BLM entered as inputs to its input-output model current forecasts of how other sectors of the Oregon economy are expected to change over the next decade. A secondary benefit of doing the type of expanded analysis suggested above is that it would allow the final Resource Management Plan/Environmental Impact Statement to discuss and evaluate options for Federally sponsored displaced work assistance that might be used to mitigate the adverse employment impacts of the selected management plan.

RESPONSE *The economic model used to conduct the impact analysis is static by design. No change has been made in the structure of the model, however additional information has been added to the text to enhance reader understanding of the outside economic influences that will be occurring simultaneously.*

Rural Interface Areas

493 **COMMENT** The BLM's strategy of buffering rural interface areas adjacent to federal lands will do little to alleviate new inappropriate developments in rural interface areas.

RESPONSE *The Proposed Resource Management Plan strategy is intended only to address the relationship to existing and planned development. Development of private lands will be guided by local comprehensive plans in conformity with statewide planning goal 4. The BLM has no direct authority to limit or constrain development on private lands.*

494 **COMMENT** Increase the BLM's participation in Oregon's statewide land use planning program.

RESPONSE *When the Resource Management Plan is approved for implementation we expect to participate in statewide and local planning whenever proposed adjacent land uses are perceived to be inconsistent with Resource Management Plan goals and objectives.*

495 **COMMENT** The BLM should have clear policy guidance for addressing rural interface issues.

RESPONSE *The Proposed Resource Management Plan has defined the objectives against which we will measure the significance of future rural interface land use issues.*

496 **COMMENT** In cooperation with the State, establish and apply a revised definition of rural interface areas which takes into account existing uses; current federal, state, and local plans; and other land use factors.

RESPONSE *After the Resource Management Plans are complete, such a comprehensive effort can be considered. Such an effort would be dependent on the availability of local, State, and BLM staffing to participate, consistent with management prioritization of workloads.*

Consistency with Other Agency Plans and Programs

497 **COMMENT** Acknowledge that preservation of BLM wetlands contributes to attainment of the Oregon Benchmark goals on wetlands.

RESPONSE *A statement has been added.*

498 **COMMENT** The Resource Management Plan/Environmental Impact Statement should better outline how the alternatives compare to the following: Recovery Plan for the Northern Spotted Owl, the Forest Service Environmental Impact Statement on Management for the Northern Spotted Owl, the Endangered Species Committee Record of Decision, Alternatives for Management of Late-Successional Forests of the Pacific Northwest, and A Conservation Strategy for the Northern Spotted Owl.

RESPONSE *The first of these is only a final draft agency document, but discussion has been added to the Consistency with Other Agency Plans and Programs section of Chapter 4. The second has been rendered moot by court ruling and superseded by the Supplemental Environmental Impact Statement and its Record of Decision. The third merely required that BLM consult with the Fish and Wildlife Service before proceeding with certain timber sales, and such consultation is embedded in the process for completing and implementing this Resource Management Plan. The last two are considered ad-hoc reports. The first of these two makes no single set of recommendations. The last makes a single set of recommendations which are specifically followed in Alternative D only.*

499 **COMMENT** The Draft Resource Management Plan fails to comply with the US Fish and Wildlife Service Spotted Owl Recovery Plan.

RESPONSE *The Fish and Wildlife Services's Biological Opinion on the Supplemental Environmental Impact Statement says that the Supplemental Environmental Impact Statement plan, which is incorporated into the Proposed Resource Management Plan, provides protection for more known spotted owl sites and currently suitable habitat than does the Final Draft Recovery Plan, and that the number of acres subject to matrix management is less than under the Final Draft Recovery Plan. Thus, we believe it meets the objectives of the Final Draft Recovery Plan.*

500 **COMMENT** The "rural interface" concept to provide buffers to property owners of less than 20 acres is another de facto withdrawal of land allocated for timber production that is contrary to the desires and needs of the citizens of Klamath County. Klamath County Zoning Ordinance Article 55, Section 55.080 (C) (2) addresses this issue by stating "a written statement is recorded with the deed or when a written contract is executed with the county which recognizes the rights of adjacent and nearby land owners to conduct forest operations consistent with he Oregon Forest Practices Act, or to conduct accepted farm practices". The language in this ordinance comes directly from the property function of County government, not the Federal government or the Bureau of Land Management.

RESPONSE *Management activities can be modified to meet adjacent and owner concerns and still meet timber growth objectives. Timber volume expected to be produced from rural interface areas and non rural interface area lands did not vary by alternative. The differences in timber volume produced from* *rural interface area buffer lands and non rural interface area buffer lands, as a result of modified management practices, is not expected to be identifiable over the life of the plan. The rural interface area Proposed Resource Management Plan has been rewritten to clarify the management direction. County Zoning Ordinance Article 55 Section 55.080 (C) (2) does not remove the right of the public to protest BLM timber sales. We find it is more acceptable, financially expedient, and responsible to work with our neighbors and develop satisfactory solutions to mutual problems whenever possible.*

501 **COMMENT** Page 2-18 and 19 (Rights-of-Way Corridors) [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. There are a couple of conflicts regarding corridor designations; 1) The BLM recognizes a 2,000 foot corridor, where County roads cross BLM lands, for future facility placement. The Winema Forest Plan did not designate County roads as Corridors. Where the Winema Plan designates corridors, corridors correspond to the existing right-of-way/easement widths. There is no continuity of corridors between the two plans. 2) Definitions of "Exclusion" and "Avoidance" are different than what were used in the Winema Plan. In the Winema Plan Research Natural Areas and Scenic Areas are Avoidance areas, not Exclusion Areas; underground utilities may be appropriate in Scenic Areas but would not be permitted if the area was an Exclusion Area.

RESPONSE *1) Restricting future major rights-of-way to existing corridors and corridor widths would require the plan to be amended before any additional right-of-way could be granted, which is an inefficient use of the planning process. The 2,000 foot corridor allows sufficient flexibility to locate the right-of-way in the most environmentally acceptable location, while the discretionary decision authority allows denial of the right-of-way if impacts are unacceptably severe. Should the corridor prove to be unacceptable, an plan amendment could be undertaken at that time. 2) Research Natural Areas fill a cell in the Oregon Natural Heritage data base and require more protection than is afforded in an avoidance area. Vegetation removal associated with construction of a major right-of-way and vegetation control associated with right-of-way maintenance usually cannot be made compatible with the visual requirements of Class I viewsheds. The BLM has the option to prepare a plan amendment should a use of a Class I area be determined to be in the public interest.*

Requirement for Further Environmental Analysis

502 **COMMENT** The Resource Management Plan/Environmental Impact Statement should identify criteria for determining what sort of National Environmental Policy Act documentation will be required for future projects. In addition, it should provide guidance for the scope of analyses expected in these tiered documents, to clarify what analyses and issues are considered fully addressed in the Resource Management Plan/Environmental Impact Statement and what analyses and issues should be further considered based on site-specific resources and conditions.

RESPONSE *The BLM National Environmental Policy Act Handbook provides some guidance on this topic. Supplementation of that guidance, with specific reference to the western Oregon Resource Management Plans seems premature until we gain experience relating to the ecosystem management concept and its many new management approaches.*

503 **COMMENT** The "Further Analysis" section should clearly disclose the cumulative watershed effects analysis procedure to be used for site specific projects during Resource Management Plan implementation. At present it appears undirected, fails to consider fish and fish habitat, and is simplistic. To be credible, the process must be peer reviewed and deemed acceptable.

RESPONSE *The discussion has been strengthened to address the relationship to the watershed analysis process and how that process will enhance cumulative impact analysis. The watershed analysis is still evolving as the BLM and the Forest Service conduct pilot analyses.*

504 **COMMENT** Describe how cumulative watershed effects analysis will be coordinated among adjacent landowners.

RESPONSE *Information available from private landowners will be gathered and considered. Most private management plans, however, are subject to change due to changing economic conditions, so we will make some assumptions about probable private management.*

505 **COMMENT** The Klamath Falls Resource Area's Draft Resource Management Plan and Environmental Impact Statement needs to address how the agency's current and proposed management complies with the Pacific Yew Act (102 P.L 335). This is in addition to the BLM's acknowledged need for "a separate Environmental Impact Statement" which is "being prepared by the US Forest Service, with BLM as a cooperating agency." The Forest Service has acknowledged that yew bark harvest at 1992 levels would be impossible to sustain for more than a few years. (Interim Guide at 22). Now that the BLM claims to have accurately determined population numbers of Pacific yew on BLM lands the agency now must propose management decisions from that calculation.

RESPONSE *Pacific Yew occurs in small quantities in the western half of the planning area. None of this yew has been nor is planned to be harvested. The Pacific Yew Record of Decision contains further information; see Appendix B.*

506 **COMMENT** According to Presidential Executive Order 12630, any federal agency is required to analyze the effects or potential effects of their action, decisions or regulations on the economic value or use of private property through the completion of a Takings Implications Assessment. I do not find any reference to such an assessment of the BLM's Klamath Falls Resource Area's Resource Management Plan despite the following impacts or potential impacts of the Resource Management Plan on private property, private property rights or investment backed expectations of rights and property. It is important that such an assessment be completed prior to that potential taking through the completion of a Takings Implications Assessment. In order to assist the federal agencies in the implementation of the President's Executive Order, the U.S. Attorney General has promulgated "Guidelines for evaluation of Risk and Avoidance of Unanticipated Takings", issued June 30, 1988. Additionally, the Department of Interior also issued guidelines implementing the Executive Order entitled "Attorney General's Supplemental Guidelines to Evaluate Risk and Avoid Unanticipated Taking for the U.S. Department of Interior", issued March 29, 1989. These agency regulations mandate the steps that federal agencies must follow in the completion of their Takings Implications Assessment's. The Resource Management Plan/Environmental Impact Statement does not indicate that this mandated action has occurred or if it has what the results were.

RESPONSE *Taking Implication Assessments are not required for planning activities.*

Executive Order 12630 Section 2 part (a) defines "Policies that have takings implications refers to Federal Regulations, proposed Federal regulations, proposed Federal legislation, comments on proposed Federal legislation, or other Federal policy statements, that if implemented or enacted would could affect a taking, such as rules regulations that propose or implement licensing, permitting, or other condition requirements or limitations on private property use or that require dedications or exactions from owners of private property."

Planning activities are specifically excluded from "Policies that have takings implications" in Section 2 part (a)(4) of the Executive Order.

Section 2 part (c) of Executive Order 12630 defines Actions. "Actions refers to proposed Federal regulations, proposed Federal legislation, comments on proposed Federal legislation, applications of Federal regulations to specific property, or Federal governmental actions physically invading or occupying private property or other policy statements or actions related to Federal regulation or direct physical invasion or occupancy, but does not include:

> *(4) Studies or similar efforts or planning activities.*

The Resource Management Plan will only affect BLM-administered public land.

507 **COMMENT** Wood River Ranch—the BLM recently assumed authority over the Wood River Ranch. This is an additional 3,000 acres added to the planning area and will have a substantial impact on BLM's management practices in years to come. The BLM has lead the public to expect restoration of wetlands and the marsh ecosystems to benefit wildlife habitat, recreational activities and improved lake water quality. This will require an extensive commitment of time and money to this project. Therefore, the Wood River Ranch project needs to be fully integrated into the overall Resource Management Plan. It can not just be added footnote to a plan.

RESPONSE *A separate Upper Klamath Basin Resource Management Plan and Environmental Impact Statement was prepared in response to the acquisition of the Wood River property and to resolve issues pertaining to the management of that and other properties in the upper Klamath Basin.*

508 **COMMENT** The draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement completely fails to discuss BLM's reasons for selecting the Preferred Alternative. This is a plain violation of the National Environmental Policy Act and the Council on Environmental Quality Regulations. BLM... fails to include any meaningful discussion which would reveal to the public BLM's reasons for preferring the Preferred Alternative. Unless these reasons are disclosed, in a detailed, specific, point-by-point discussion, the Environmental Impact Statement will be legally invalid.

RESPONSE *In the draft Resource Management Plan/Environmental Impact Statement Summary at the beginning of the full document, page S-6, is a statement about the BLM's reasons for choosing the Preferred Alternative, which has been replaced by the Proposed Resource Management Plan. In many respects the rationale still applies to the Proposed Resource Management Plan. The BLM believes that the Proposed Resource Management Plan would best balance public demands and the capabilities and limitations of the resources, within the constraints of a variety of legal mandates. Chapter 1 also included a description of the purpose and need for the action. Chapter 1 of the Proposed Resource Management Plan/Final Environmental Impact Statement also contains such a discussion of the purpose and need for the action.*

Use of the Completed Plan

509 **COMMENT** Detail how BLM intends to integrate management, monitoring and research to continually apply adaptive management and improve the scientific basis for ecosystem management.

RESPONSE *The discussion in Chapter 2 has been expanded. Further elaboration is contained in the Supplemental Environmental Impact Statement Record of Decision and its Monitoring and Evaluation Plan.*

510 **COMMENT** Clarify how timber sale volumes and associated programs will be reduced if annual funding is not sufficient to support monitoring.

RESPONSE *The discussion in Chapter 2 has been expanded.*

511 **COMMENT** Do not plan any timber sales until there is an approved Resource Management Plan and all court injunctions are lifted.

RESPONSE *Since planning of individual timber sales usually takes a year or more, it would be irresponsible for BLM to defer all such planning until final Resource Management Plan approval. Tentative site-specific plans based on unapproved versions of the Resource Management Plan can be adjusted as needed to conform to the Resource Management Plan as approved.*

512 **COMMENT** Individual forest project plans should evaluate protection needs for intermittent order 1 and 2 streams, and apply protection as needed to protect channel integrity and identified beneficial uses. Project planning should also evaluate potential cumulative effects on beneficial uses outside the project area sub-basin.

RESPONSE *The Aquatic Conservation Strategy which is part of the record of decision for the Supplemental Environmental Impact Statement addresses this concern and is incorporated in our Proposed Resource Management Plan. Watershed analysis will address it at the sub-basin level.*

Monitoring

513 **COMMENT** Detailed monitoring plans should be developed within one year after final plan completion. They should contain procedures which have undergone appropriate peer review. They should also identify thresholds which trigger changes in practices or procedures or result in plan changes.

RESPONSE *Further detail in the monitoring plan awaits refinement of the Monitoring and Evaluation Plan for the Supplemental Environmental Impact Statement.*

514 **COMMENT** The monitoring plan should include written standards for sampling design, monitoring parameters, analytical techniques, statistical methods, reporting units, location of sampling, indicator species, budget, and procedures for using data or results in plan implementation; and availability of results to interested and affected groups. It should also have a clear feedback mechanism which enables the use of monitoring results to adjust standards and guidelines, BMPs, standard operating procedures, monitoring intensity, and project implementation.

RESPONSE *We believe some of these details belong in technical handbooks. Others will be developed after the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan is refined or within the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan.*

515 **COMMENT** Why aren't monitoring standards presented for each land allocation (old growth emphasis areas, connectivity areas, general forest management areas)?

RESPONSE *This kind of stratification is included in the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan for the allocations made in the Supplemental Environmental Impact Statement Record of Decision. The proposed Resource Management Plan Monitoring Plan parallels the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan.*

516 **COMMENT** Why haven't monitoring questions been tied to measurable standards?

RESPONSE *For most topics, this tie awaits completion of the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan.*

517 **COMMENT** Is there a tie between implementation and effectiveness which is necessary for meeting the expected future condition (ecosystem management)? Does the BLM have a long-range monitoring framework which will direct the agency over the next 100 years in order to meet these expected future conditions?

RESPONSE *The Monitoring and Evaluation Plan for the Supplemental Environmental Impact Statement is expected to provide both the tie and the framework.*

518 **COMMENT** The extent of cumulative watershed effects analysis validation should be described.

RESPONSE *This description awaits refinement of the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan.*

519 **COMMENT** Consider on-site inspection to monitor BMP implementation.

RESPONSE *This will be part of contract administration.*

520 **COMMENT** Consider riparian management area monitoring to assess long-term organic debris contribution to stream systems.

RESPONSE *The Supplemental Environmental Impact Statement Monitoring and Evaluation Plan calls for this in Key Watersheds. It is also incorporated in our Monitoring Plan.*

521 **COMMENT** Consider a research/monitoring program to determine the effects of spatial/temporal segregation of timber harvests on sediment and hydrology.

RESPONSE *Consideration of this awaits refinement of the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan.*

522 **COMMENT** To obtain more specific data from evaluation and monitoring, subdivide analytical watersheds greater than 10,000 acres into smaller units.

RESPONSE *Much of the aquatic systems monitoring will focus on watersheds smaller than 10,000 acres.*

523 **COMMENT** Monitor activities in each watershed to determine cumulative effects on water, soil, fish and other resources.

RESPONSE *The Supplemental Environmental Impact Statement Monitoring and Evaluation Plan will be based on a determination of the level of such monitoring that would be cost effective.*

524 **COMMENT** Mining activities in or adjacent to streams should be monitored to determine if they are adversely affecting riparian area vegetation.

RESPONSE *Such effectiveness monitoring may be included in the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan. Activities in approved plans of operations would be monitored for conformity to Resource Management Plan direction (implementation monitoring).*

525 **COMMENT** Monitor to assess impacts on Oregon sensitive species.

RESPONSE *The Supplemental Environmental Impact Statement monitoring plan will define the extent of special status species monitoring for those species which occur in special habitats. Species in the Forest Ecosystem Management Assessment Team report matrix or those not in special habitats will be monitored if monitoring is prescribed in an environmental assessment for a proposed action.*

526 **COMMENT** Monitor to ensure target levels of dead-and-downed wood are attained.

RESPONSE *The Supplemental Environmental Impact Statement Monitoring and Evaluation Plan addresses this.*

527 **COMMENT** Give more attention to monitoring the population and geographic distribution of special status plant species.

RESPONSE *Conservation of the special status plant species will include preparation of management plans considering the geographic distribution of these species and the role of BLM populations in the survival of the species. As needed to conserve the species, these plans will direct: determination of species requirements where the BLM can act to enhance survival or recovery, implementation of BLM actions in recovering or enhancing the species, and assessment of the effectiveness of those actions. Sampling of population trends will be a means of assessing what needs to be done as well as effectiveness and appropriateness of these actions in recovery of the species.*

528 **COMMENT** Use recent advances in technology to monitor special status plants, especially listed plants. Address monitoring of special status plant species in more detail.

RESPONSE *Monitoring guidelines in the Resource Management Plan must be general in nature. There is too much variation between populations and site-specific management objectives to provide more detail. More detail will be developed during activity planning following the completion of the Resource Management Plan and refinement of the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan. The most cost-effective technology will be used.*

529 **COMMENT** Riparian management area monitoring should focus partly on amphibians or other key dependent species.

RESPONSE *The extent of such validation monitoring in Riparian Reserves will be defined by the Supplemental Environmental Impact Statement Monitoring and Evaluation Plan.*

530 **COMMENT** Monitoring fish and fish habitat in one stream per resource area seems insufficient.

RESPONSE *All key watersheds will be monitored.*

531 **COMMENT** Previously logged areas should be selected for study and monitoring of experimental efforts to restore old growth conditions.

RESPONSE *Such studies are ongoing in existing monitoring and research programs by other agencies. Some areas have been identified where past logging on lands BLM administers appears to be leading to early development of old growth conditions, and these are being monitored.*

532 **COMMENT** A monitoring program should be established to identify noxious weeds before they become a problem.

RESPONSE *As part of the Cooperative Agreement between the BLM and the Oregon Department of Agriculture, the Oregon Department of Agriculture conducts noxious weed field surveys; collects and redistributes biological control agents; and monitors results and efficiency of bio-control sites. Noxious weed infestations have already been identified with townships and sections. We continue to locate problem areas during proposed project planning when sites are surveyed.*

533 **COMMENT** Incorporate the rural interface issue into the BLM's agreement for monitoring implementation of BLM plans.

RESPONSE *Rural interface area monitoring is included in the Proposed Resource Management Plan Monitoring Plan.*

534 **COMMENT** Monitoring the Resource Management Plan.... Perhaps an outside entity should monitor the plans progress - etc.

RESPONSE *Other agencies or individuals are invited to participate in monitoring the Resource Management Plan with the BLM but must do so at their own expense.*

535 **COMMENT** While best management practices are intended to protect water quality, they must be monitored to verify their effectiveness. An important component of Resource Management Plan implementation is the commitment to conduct monitoring. The Environmental Protection Agency would like to see criteria outlined in the final Resource Management Plan/Environmental Impact Statement that clarify how this commitment will be met during Resource Management Plan implementation. The final Resource Management Plan/Environmental Impact Statement should not rely solely on the application of best management practices to satisfy the Clean Water Act. Since the use of best management practices does not guarantee compliance with water quality standard, the final Resource Management Plan/Environmental Impact Statement should discuss the effectiveness of best management practices with illustrations of specific project examples and/or monitoring results.

RESPONSE *It is recognized that best management practices are the primary mechanism to enable the achievement of water quality standards. Best management practices are selected to achieve water quality standards. The iterative process that will be followed includes: (1) design of best management practices based on site-specific conditions, technical, economic and institutional feasibility and the water quality standards of those waters potentially impacted; (2) monitoring to ensure that practices are correctly designed and applied; (3) monitoring to determine; a) the effectiveness of practices in meeting water quality standards, and b) the appropriateness of water quality criteria in reasonable assuring protection of beneficial uses; and (4) adjustment of best management practices when it is found that water quality standards are not being protected to a desired level and/or possible adjustment of water quality standards based on considerations in 40 Code of Federal Regulations 131. Additional monitoring, such as the effectiveness monitoring mentioned, is discussed in the Proposed Resource Management Plan.*

536 **COMMENT** Page 2-6. The [draft KFRA] Resource Management Plan states that "Monitoring of riparian zone conditions would occur periodically..." The term periodically should be quantified. The Resource Management Plan states that "[e]xisting snags, riparian vegetation, and woody debris in riparian zones would not be removed or managed to maintain or enhance stream channel and bank structure" (Emphasis added). The (bolded) "or" should be replaced with "but would instead be". If the sentence reads as intended, we question the wisdom of such an activity. The Resource Management Plan also states that "[a]n interpretive program intensive multiple use management systems currently being used to bring about improvements in riparian conditions" (sic). The intent of this sentence is unclear.

RESPONSE *Monitoring of specific riparian zones would occur at intervals assigned on a site-by-site basis. Intervals could range from 3-4 times per year to five years, based on resource conditions and management concerns. The first sentence you cite should have read: "Existing snags, riparian vegetation, and woody debris in riparian-wetland areas would be managed to maintain or enhance stream channel and bank structure, or would be left in place". The second sentence you cite should have read: "An interpretive program would be developed to provide information and education on the intensive multiple use management systems being used to improve riparian-wetland conditions in the Klamath Falls Resource Area". The first sentence has not been carried forward into the Proposed Resource Management Plan; instead the objectives from the Aquatic Conservation Strategy in the Supplemental Environmental Impact Statement Record of Decision are incorporated. The second statement has been carried forward into the Proposed Resource Management Plan.*

Miscellaneous Klamath Falls Comments/Responses

537 **COMMENT** 2-49 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. It states a management plan might cost $40,000 and monitoring cost under $4,000. I think this time and money could be better spent somewhere else. The nature of the canyon is so rocky and trees and grass have been well established where possible and little public use ; I doubt the canyon will change any if managed as it has been in the past.

RESPONSE *The Klamath River Canyon receives approximately 12,000 visitor use days annually. Public use in the Klamath River Canyon has been increasing approximately 5 percent annually over the last several years. The existing plan addresses only the whitewater rafting portion of the publics use. Hunting, fishing, camping, control of vehicles, etc. are not currently addressed and require more specificity than can be provided for in the Resource Management Plan. A plan is necessary to allow for continued public use and to insure protection of the Outstanding Remarkable Values.*

538 **COMMENT** Page 2-76, Last paragraph under Roads [in the draft KFRA Resource Management Plan/ Environmental Impact Statement]. Alternatives C, D, E and the Preferred involve substantial costs for closure of roads. What would the costs be is the roads were not closed?

RESPONSE *The majority of roads to be closed would be natural or pit run roads. Over a ten year period, the costs could be equal or similar to the cost of road closures. Annual road maintenance will need to occur to prevent erosion and surface rutting.*

539 **COMMENT** Something that seems to constantly be overlooked is the funding that is available through the All Terrain Vehicle-Account Allocation Committee for the state of Oregon. There are dedicated gas taxes that are set aside in this program for development, acquisition, maintenance, safety and education and administered through a committee of motorized users and the ODT Highway Division. The funds available amount to over $1 Million per year. Something should be done to take advantage of this funding. Not only would motorized recreation be enhanced in the Klamath Resource Management Plan but Klamath County would also benefit.

RESPONSE *We are familiar with the availability of All Terrain Vehicle gas tax funds. We look forward to using such cooperative funding opportunities following Resource Management Plan completion. We anticipate applying for all terrain vehicle funds as we develop activity level plans or Recreation area management plans for off-highway vehicle/all terrain vehicle trails or areas.*

540 **COMMENT** "Your [KFRA] plans for road building also violate the Clean Water Act because the new roads will contribute sediment to already impacted streams."

RESPONSE *Best Management Practices (BMPs) are a primary mechanism to achieve water quality requirements. Section 319 of the Clean Water Act of 1972, as amended (1977 and 1987) requires that the States determine those waters that will not meet the goals of the Act, to determine those nonpoint source activities that are contributing pollution, and to develop a process of determining best management practices to reduce such pollution to the "maximum extent practicable." Department of Environmental Quality Oregon Administrative Rules contain water quality requirements for identified beneficial uses of water in relation to the antidegradation policy, the requirement for the highest and best control of waste activities, temperature and turbidity. The Environmental Protection Agency has certified the Oregon Forest Practices Act as best management practices. Practices proposed by the BLM in its Proposed Resource Management Plan exceed Oregon Forest Practice Act requirements for water quality and riparian area protection. The BLM meets Oregon water quality requirements through implementation of best management practices and the standards and guidelines as presented in the Resource Management Plan. Implementation and effectiveness of best management practices will be monitored to insure that antidegradation and other water quality requirements are being met.*

541 **COMMENT** I see no mention of Oregon's Wild Fish policy. This should be stated in the [KFRA] Environmental Impact Statement.

RESPONSE *See Appendix 4-H, page 4-111 of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement. Also, see Appendix X in the Proposed Resource Management Plan.*

542 **COMMENT** Oregon Department of Environmental Quality's 1988 non-point source report identified many stream segments in your district that have serious non-point source pollution problems that are caused by forest practices. The DEIS violated National Environmental Policy Act by not updating that report with more recent information.

RESPONSE *Results of water quality monitoring in the planning area were listed on page 3-21 of the draft Klamath Falls Resource Area Resource Management Plan/Environmental Impact Statement. In addition, calculation of the watershed condition index entailed compilation of the most recent data available for both BLM and non-BLM administered lands. Information made available since the draft Environmental Impact Statement was written has been incorporated into the Final Environmental Impact Statement.*

543 **COMMENT** Page 3-26 [of the draft KFRA Resource Management Plan/Environmental Impact Statement], the last sentence of the 1st full paragraph starting with "The average dead and down..." If it is dead and down it can not contain snags. See glossary.

RESPONSE *The appropriate revisions have been made for the Proposed Resource Management Plan.*

544 **COMMENT** Why are plant and animal species not listed by name in Table S-3, on page S-9 [of the draft plan]?

RESPONSE *This chapter is a summary of the entire document and therefore this table contains only a summary of the total number of special status plant and animals. The complete list of all species and their status were listed in the drafts Chapter 3, Table 3-19 for plants and Table 3-20 for animals.*

545 **COMMENT** Page 3-56 Table 3-20 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. Spotted frog, northern goshawk, and Pacific fisher are Federal candidate species (category 2).

RESPONSE *The appropriate revisions have been made in the Proposed Resource Management Plan.*

546 **COMMENT** Page 2-100, in Table 2-2 [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. The Resource Management Plan is not clear as to what the buffer areas will provide for management. The Resource Management Plan should clearly indicate whether these are areas within which no logging activity will occur or areas where no possible degradative activity will be allowed (which would include grazing). The term "buffer" should be defined.

RESPONSE *A buffer generally refers to protection from any surface disturbing activity, usually timber harvest, road building, mineral exploration, and other management activities. Grazing and other less significant activities relevant to "disturbance" may or may not be allowed. Buffers could also mean that treatments, such as underburning or thinning, could be allowed to enhance the buffer characteristics or purposes.*

547 **COMMENT** The [draft KFRA] Resource Management Plan states that "[t]he majority of land management actions that affect water quality occur on non-BLM, primarily private and other federal, lands." This statement appears to be in direct conflict with the data on water quality presented on page 3-20, Table 3-8, titled "Results of the 1988 DEQ Oregon Statewide Assessment of Nonpoint Sources of Water Pollution on BLM-administered Lands" (emphasis added). This should be clarified or corrected.

RESPONSE *The title of this table has been changed to: "Summary of the 1988 Department of Environmental Quality Oregon Statewide Assessment of Nonpoint Sources of Water Pollution". A footnote for this table will indicate that only those waterbodies located on BLM-administered lands have been listed. Effects on waters downstream of the planning area are discussed in Chapter 4.*

548 **COMMENT** Pages 3-36/37, Table 3-14 Condition Rating of Streamside Riparian Zone [of the draft KFRA Resource Management Plan/Environmental Impact Statement]. Ratings of good/optimum on several of the east side streams appears to be overrated, such as on Ben Hall Creek, Pitchlog Creek, Barnes Valley Creek and Pitchlog Creek. Table 3-15 lists Degraded Riparian Systems which includes all of the above streams. Also see the picture on page 3-46 of Ben Hall Creek in poor/fair condition. There is also a discussion about Ben Hall Creek on page 3-39 pointing out its poor condition. The bottom line is at least some of the condition ratings in Table 3-14 are wrong.

RESPONSE *Table 3-14 of the draft Resource Management Plan/Environmental Impact Statement contained numerous typographical errors. Appropriate corrections have been made in the Proposed Resource Management Plan.*

549 **COMMENT** The four graphs displaying information about analytical watersheds on page 4-16 [of the draft KFRA Resource Management Plan/Environmental Impact Statement] are printed too small to be read without a magnifying glass. These graphs should be enlarged so that they fit two to a page. Otherwise, they are practically useless and might as well be left out altogether.

RESPONSE *The watershed condition index and associated analysis is not included in the Proposed Resource Management Plan/Final Environmental Impact Statement.*

550 **COMMENT** Many foresters contend that partial cut and shelterwood systems often require greater road densities than clear cut systems. In addition, partial cut and shelterwood systems may have higher per unit sale preparation costs. Therefore, the final RMP/EIS should explain how road density objectives will be achieved.

RESPONSE *In general, partial cut and shelterwood systems require greater road densities than clear cut systems. However, most roads required for timber harvest have already been built.*

The Proposed Resource Management Plan has a goal of 1.5 miles of open road density per section. This long-term objective was adopted from a recommendation of the Oregon Department of Fish and Wildlife to minimize wildlife harassment form human activity. The BLM will strive to meet this goal by blocking lesser used secondary roads with barricades or gates. Some secondary roads would also be permanently closed by ripping and seeding.

Partial cut and shelterwood systems do typically have a higher per unit sale preparation cost than do clear cut systems.

551 **COMMENT** BLM states "forest health issues will play a significant role in forest management decisions in the future." Forest health issues should begin to play a significant role in present forest management decisions. While BLM has acknowledged the need to use prescribed fire, failure to retain the large old ponderosa pine has been attributed to much of the forest health problems presently being experienced in the Blue Mountains.

RESPONSE *Forest health is a primary concern in both present and future forest management decisions. The silvicultural prescriptions used in the Proposed Resource Management Plan emphasize structural diversity, and the retention and protection of a large tree/old growth component of the forest. This approach is different from the past cutting practices in the Blue Mountains.*

552 **COMMENT** Since helicopter logging is included in the BMP discussion, the final RMP/EIS should include a discussion of noise impacts that could be associated with helicopter use, including the noise levels that might be experienced by those who live or recreate in the vicinity. This is important because helicopters at 500 feet are comparable to sound levels of heavy trucks and city buses heard from a street. This could be significant in areas of very low ambient noise levels.

RESPONSE *Less than ten percent of the commercial forest land in the planning area is located on slopes steeper than thirty-five percent. This steeper ground is suitable for harvest by aerial systems like skyline, high-lead, or helicopter logging. The majority of this land is in the high country of Surveyor Mountains, Kent Peak, Bryant and Stukel Mountains, and Swan Lake Rim. These areas are not located near rural interface areas or high-use recreation sites. The Pacific Crest Trail crosses a mile of BLM-administered land in the Old Baldy area, and distant helicopter logging noise could be heard from there. Although overall noise impacts from helicopter logging are expected to be minimal.*

553 **COMMENT** Page 3-25. Table 3-10 is incomplete without the number of trees inventoried (by size) in order to arrive at the average diameter shown in column one.

RESPONSE *Table 3-10 of the draft plan does not **require** the number of trees inventoried by size, for completeness, although this data **was used** to calculate the average diameter value. The information is available at the Klamath Falls office.*

554 **COMMENT** ...the approach taken by the Klamath Falls Resource Area to evaluate and quantify the effects that land use allocations and restriction on timber management practices have on timber production. We suggest, however, that to facilitate an understanding of your analysis that the data generated be displayed in tabular form showing for the Proposed action the acreage of suitable commercial forest land allocated for the purpose of enhancing or protecting resources other than timber together with an estimate of the reduction in ASQ attributable thereto. We make this request because we believe the decision makers and the public need to know with some precision the amount of timber production which will be forfeited in the enhancement and protection of resources other than timber.

RESPONSE *The "Effects on Timber Production" section of Chapter 4 discusses the effects of Riparian Reserves, special management areas, and the other allocations and restraints on timber management and production for the Klamath Falls Resource Area. Both the Timber and Socioeconomic sections of the Proposed Resource Management Plan have been rewritten to a large degree.*

555 **COMMENT** The resources on BLM lands, particularly plants, can be better managed than with herbicides. In fact, the U.S. EPA's Office of Drinking Water states in its drinking water health advisories for pesticides (Lewis Publishers, 1989) that hexazinone, glyphosate and picloram have no methods that can be found in the literature to effectively treat water that has been contaminated with these pesticides. BLM states in the RMP that treatable water will be provided to those who offer public drinking water sources. It is not acceptable to contaminate water that cannot be treated.

RESPONSE *Analysis of pesticide use was fully analyzed in the BLM's 1989 environmental impact statement, Western Oregon-Management of Competing Vegetation and the BLM's 1986 environmental impact statement, Northwest Area Noxious Weed Control (as supplemented in 1987), to which this environmental impact statement and resource management plan is tiered. See the draft plan page 1-7, and Chapter one of the proposed resource management plan.*

556 **COMMENT** The final RMP/EIS should consider timber sale economics as a management concern for analysis in response to the full public disclosure intent of NEPA and in response to the national controversy regarding below-cost timber sales.... Therefore, the final document should provide clear descriptions of key assumptions regarding intensive management practices, interdisciplinary team costs, sale preparation, timber pricing, product valuation, discount rates, rotation lengths, road and access costs, and road maintenance.

RESPONSE *The socioeconomic sections of the document have been revised to reflect some of these types of concerns. Also, refer to the responses to comments in the Budget Assumptions and Timber-Demand, Supply, and Market Effects sections of this appendix.*

557 **COMMENT** Page 2-8, under Timber Harvest: West of Hwy. 97, skid trails would be deigned to affect less than 12 percent of the land. This appears to be highly excessive. Twelve percent of one square mile would be more than 12 miles of skid trails 50 feet wide. What is the average width of skid trails on past timber sales? The 20 percent average on the east side is even worse. Are your numbers accurate?

RESPONSE *When a timber stand is harvested by ground equipment, a network of skid trails is required to move logs to landings at haul roads. To minimize the area covered by skid trails, a network of permanent, designated (planned) skid trails is laid out prior to yarding. This is in contrast to unrestricted yarding where the equipment is allowed to travel throughout a harvest unit and severely compact much of the forest soil. Designated skid trails are permanent because, when properly designed, they can be used for any subsequent stand entry. This is especially true in selective harvests where entry interval for thinnings or salvage can be 10 to 30 years.*

Skid trails generally measure 10 to 12 feet wide. Appendix F describes the current direction to limit the skid trails and landings to less than 12 percent of the harvest area (both east and west side).

558 **COMMENT** The last paragraph states that the west side has 6,900 acres. This appears to be in conflict with table S-1, parge 15, i.e. "West side old growth acres excluded from harvest = 1,235 (PA) 22 percent. In addition, 2,238 acres are managed for only partial retention." Though old growth acres for the east side are not give it would appear from the fighres in table S-1 that an even greater percent would be harvested! (comparing alternative E and Preferred).

RESPONSE *The west side has 6,900 acres of old growth forest. Table S-1, "Allocations/Management Actions by Alternative for Old Growth and Mature Habitat", shows the amount of old growth and mature stands that would be* ***excluded*** *from timber harvest or* ***managed*** *for partial retention. It does* ***not*** *show old growth/mature stands that would be harvested in the first decade of the plan. It should be remembered that harvest prescriptions for the proposed resource management plan emphasize structural retention, and that such harvests typically would involve thinnings and individual tree selection where existing stand structure is maintained and enhanced by increasing stand vigor.*

559 **COMMENT** Page 2-81, Table 2-1, Old Growth and Mature Habitat. We suggest this table be expanded to identify both the amount of old growth and mature stands that presently exist for both the west and east sides.

RESPONSE *In that portion of table 2-1 the intent was to show and compare the alternatives for old growth and mature stands in selected allocation and management categories. This table was meant to be a summary and tool to compare management actions across the alternatives. It was not intended to provide information on the existing environment. Table 3-11, Existing Older Forest Blocks, of the draft resource management plan (page 3-27), shows the existing area of old growth and mature forest for the east and west sides.*

560 **COMMENT** For the west side, the No Action Alternative is a radical departure alternative, in that all the land allocated to intensive and restricted management would be cut by two-stage shelterwood cutting (even age) on a 25 years rotation cycle (39,720/1610, Table 2-1)....this is not sustainable forestry.

RESPONSE *A No Action alternative is required under the National Environmental Policy Act. See response to comment number . Shorter rotations produce an economic return sooner, and are more attractive economically. Intensive forest management involves the application of growth enhancing treatments (thinning, fertilization, etc.) which are done often at the expense of other resource values (such as wildlife habitat, scenic values, etc.). The No Action Alternative is just one of the seven alternatives being analyzed and considered for selection.*

561 **COMMENT** Recreation needs to be further developed on BLM lands. More trails should be constructed, not only in forested areas but in sage-juniper-grasslands as well.

RESPONSE *Many potential recreation sites and trails were described in the draft Resource Management Plan/Environmental Impact Statement. Additional sites and tracts have been identified for the final PRMP, including several miles of additional trails in the sage-juniper-grasslands area. We refer you to potential trails identified for development in Chapter 2, Recreation Section.*

Tracts along Miller Creek, Barnes Valley Creek, Bryant Mountain, Stukel Mountain, Swan Lake Rim, and Gerber Point or located in the sage-juniper-grasslands area. Some or all of these sites and trails would be developed as funding and/or recreation partnerships become available.

562 **COMMENT** The "Modoc Trail" is the only mention of hiking trails. Has anyone considered cross country ski trails. This sport is growing in many areas and could add to the economic base - in winter! At least one trail could terminate at an overnight hut for six or eight people. A permit/reservation system would prevent overcrowding.

RESPONSE *Many potential hiking trails were described in the draft Resource Management Plan (see p. 3-77). Additional hiking trails have been identified for the final Proposed Resource Management Plan. In regards to cross country ski trails, the Hamaker Mountain area located south of Keno, Oregon, has been identified for future trail and recreation site development with an emphasis on winter sports and mountain biking. The identification and resolving of specific recreation management issues (such as developed parking areas, warming huts, designated trails, etc.) would occur during watershed analysis or activity level planning following RMP completion.*

563 **COMMENT** We would like to make a proposal to dedicate a small number of snowmobile trails in the Surveyor Mountain area. We feel a strong need to diversify some use away from the Lake-O Woods area. As the 4 corners surveyor snow play area is becoming ever more popular and its close proximity to Klamath Falls make it an ideal diverse area. The very heavy use of Lake-O Woods is creating hazards on both the Big Meadow and surrounding trails. We would like to suggest that the dedicated trail be closed to 4 wheel drive vehicles on December 15th. Some other advantages to the trail designation would make for easy access for BLM personnel, also easy access for people from Fish and Wildlife to monitor game species, and make search and rescue through the entire system simpler. We would like to see snowtrails that tie in with the snowtrails in both Medford BLM trail system and Winema trails and Rogue National Forest.

RESPONSE *In discussions and field trips with local recreation groups, potential snowmobile trails and a snowpark near the intersection with Clover Creek Road and Spencer Creek Hook-Up Road (4 corners area) were identified. These potential trails and developments were included in the draft Resource Management Plan/Environmental Impact Statement in Table 3-27, Existing and Potential Recreation Trails. The identification and resolving of specific recreation management issues (such as off-highway vehicle trail closures) would occur during watershed analysis or activity level planning following RMP completion.*

564 **COMMENT** One of the few areas where er have an opportunity to construct a new off-highway trail is the Swan Lake Rim area. The proposed alternative in the Klamath RMP would close this area to all motorized use. We feel the area could provide for a trail that would give the motorized as well as nonmotorized users a unique primitive experience. I would hope that you will reconsider this designation and not limit the motorized use until further study is done to see if the multiple use trail is feasible. The 2002 Trails Committee has proposed a trail which would not be limited to nonmotorized use. the geology of the area limits the travel of off-highway vehicles to definite trail. We propose that if the trail is used for off highway vehicles that use could be limited through a permit system if necessary.

RESPONSE *In Table 2-7 of the draft Resource Management Plan/Environmental Impact Statement the Klamath Falls Resource Area proposed managing the Swan Lake Rim area for semi-primitive nonmotorized recreation opportunities. This is essentially a continuation of the existing situation as there is no public road access into the area, and the few existing roads leading into the area are private access only. The area is proposed as semi-primitive nonmotorized recreation because of the lack of public road access, primitive qualities,and the lack of developments.*

After consideration of all the comments on this area, both for allowing motorized access (on a limited or permitted basis) and for maintaining nonmotorized access. The resource management plan interdisciplinary team recommended that for the final Proposed Resource Mangement Plan, the area remain available for development of a nonmotorized trail access only. The Klamath Basin has very few areas (outside of designated wilderness area) that meet the criteria for semi-primitive nonmotorized recreation. This area will help meet a regional need, identified in the State of Oregon's Comprehensive Outdoor Recreation Plan (SCORP) for such recreation opportunities.

The final Proposed Resource Management Plan has identified the Stukel Mountain, Hamaker Mountain, and Bryant Mountain areas where off-highway vehicle trail use could be developed using existing roads/ trails or through the development of new off-highway vehicle trails. The identification and resolving of specific recreation management issues (such as off-highway vehicle trail designating and locations of new trails) for the Stukel Mountain, Hamaker Mountain, and Bryant Mountain areas would occur during watershed analysis or activity level planning following resource management plan completion.

565 **COMMENT** Over the years, ATV and motorcycle riders, in the area, have had to take it upon themselves to recreate wherever they could find a place to unload without attracting attention. Many land managers are unaware of this or the amount of motorized use their forest actually gets. We are requesting areas that are properly designated, managed, and maintained for our use. Even though there seems to be an abundance of routes and facilities for nonmotorized users and even more being planned and constructed, these opportunities do not exist for motorized users. The purpose of this letter is to officially express the need for a well planned, designated trail system on your forest and to have them incorporated into your travel access and management plans.

RESPONSE *See the response to Comment Number 348. In addition, off-highway vehicle and all-terrain vehicle trails would be included in our transportation management system and Klamath Falls Resource Area recreation guides once they are designated.*

566 **COMMENT** The BLM Klamath Falls Resource Area Management Plan has recommended in its preferred alternative that Swan Lake Rim be managed as semi-primitive nonmotorized. The plan does offer a hint of planning involvement to equestrian, hiking, and mountain bikes but ignores the needs of the motorized community. BLM offers the argument that Swan Lake Rim is the only opportunity in the Klamath RMP for semi-primitive nonmotorized management. While that may be true, the argument ignores the fact that other areas managed by U. S. Forestry scarcely 20 miles distant embraces those same values.

RESPONSE *While there are other primitive or semi-primitive nonmotorized recreation areas nearby (for example, Mountain Lakes Wilderness) these areas are designated wilderness and closed to mountain bike use. We are unaware of any similar dedicated semi-primitive nonmotorized areas available for hiking, equestrian, and mountain bike use within 20 miles of the Klamath Basin.*

The recently created Oregon, California and Eastern Rail Trail will offer easy nonmotorized access from the Klamath Basin to the Swan Lake Rim area. This nonmotorized trail from the Klamath Falls area will provide an opportunity not currently available to those travelling to existing wilderness areas.

567 **COMMENT** P 2-15, 1st column, 5th full paragraph: The statement concerning mandated non-conflict of off-road vehicle use with other resources ("...off-road vehicle use cannot cause significant adverse impacts to other resource values....) seems inconsistent with many of the options specified under all the alternatives proposed. Given the wealth of information available in the impacts of off-road vehicle use on wildlife (sources available on request), it seems likely that even under the most restrictive alternative (E) there may be abundant potential for conflict not only with existing resource values but also other regulations, in particular the Endangered Species Act. the general section on off-road vehicles and potential impacts is in my opinion poorly developed and needs not only further documentation, but expansion and consideration of area-specific and general impacts, in particular examination of potential or documented effects on wildlife resources, vegetation, soil and hydrology, and water quality.

RESPONSE *See the previous responses to comments 344, 345, and 346. In addition, the PRMP, Chapter 2 Recreation Section has been modified to better explain the off-highway vehicle designation areas. Any additional areas with resource conflicts due to off-highway vehicle use would be identified during watershed analysis or other activity level planning. In addition, emergency off-highway vehicle closures or limitations can be provided for areas in need of immediate resource protection.*

568 **COMMENT** Page 2-112. I believe the Pokegama wild horse management area should have been included in Table 2-6, as it is also a special management area. All Special Management areas should have been outlined and identified on all of the large Alternative maps. I believe the Pokegama wild horse management area should have been listed in Table 3-21. Please explain this omission.

RESPONSE *As defined in the glossary, special areas are those "areas that may need special management, which may include management as an area of critical environmental concern (ACEC), research natural area, outstanding natural area, environmental education area, or other special category. The potential area of critical environmental concern inventory conducted for the BLM by a contractor did not identify the Pokegama wild horse management area for area of critical environmental concern designation and the resource management plan interdisciplinary team decided that the Pokegama area does not warrant a special area land use allocation label.*

The Pokegama wild horse herd will be managed as described in the Proposed Resource Mangement Plan, Chapter 2, Wild Horse section.

569 **COMMENT** In Chapter 2, Table 2-6 the plan states that Old Baldy proposed ACEC/RNA will be open to grazing and limited ORV use. RNAs are set aside to preserve examples of all significant natural ecosystems to compare with those influenced by humans; to provide educational and research areas for ecological and environmental studies; and to preserve gene pools for typical and rare and endangered plants and animals. Grazing and ORV use would certainly compromise the utility of Old Baldy to act as a benchmark area. The above mentioned table also states that the Old Baldy would not be available for planned timber harvest. It would be better if it said no timber harvest as things like salvage sales and firewood gathering are also not appropriate.

RESPONSE *The draft Resource Management Plan, Table 2-6 has been modified for the final Proposed Resource Mangement Plan to show that no timber harvest, including salvage sales and firewood gathering, would be allowed in the area. Off-highway vehicle use in the area around Old Baldy would be limited to existing roads. The Old Baldy Research Natural Area itself would be closed to Off-highway vehicle use.*

The Old Baldy area has not received use from cattle due to heavy brush, timber, and lack of water and suitable forage. While Table 2-6 of the draft Resource Management Plan/Environmental Impact State-

ment shows that Old Baldy area open to grazing use, for all practical purposes the area will receive no use from cattle grazing due to natural features and restrictions. Table 2-6 has been modified for the Proposed Resource Management Plan to show that the area will be maintained free of cattle use, and no developments will be allowed to enhance the potential for cattle graizng in the Old Baldy area.

570 **COMMENT** Regarding the Yainax Butte proposed ACEC. Even though this site had been burned in a wildfire that occurred after the initial recommendation, the designated area should include the burned area for several reasons. First, the fire was patchy in its intensity such that parts of the burned site survived relatively intact; this is especially important in the case of the rare plant species, *Penstemon glaucinus*, in the ACEC. Secondly, the fire burned in an area that was considered as a necessary buffer for the larger ACEC and thus the burned area is still critical for the long term viability of the ACEC.

RESPONSE *The John Springs fire burned an area of approximately 125 acres within the proposed Yainax Butte area of critical environmental concern in June 1992. The designated boundaries of the area of critical environmental concern will remain the same of those of the original recommended boundaries, and will include that portion of the burned area within the original boundaries.*

The BLM recognizes the importance of maintaining fire in the Yainax Butte area. Prescribed fire will be used in the future, to maintain the natural fire adapted plant species, including Penstemon glaucinus.

571 **COMMENT** Since the drafting of the RMP there has been further work in analyzing the Old Baldy proposed RNA/ACEC. Inventory conducted on nearly public lands confirmed that the site contained a good representation of the target natural community. The community is an unfilled natural area cell need described in the *Oregon Natural Heritage Plan*. Continuing refinement of the boundaries of the proposed natural area is being made by the resource area and should be finalized by the final RMP.

RESPONSE *The potential area of critical environmental concern inventory conducted by a contractor for the BLM identified the Pacific Crest Trail/Old Baldy Area as a potential area of critical environmental concern/research natural area. During the draft Resource Management Plan planning process, the Old Baldy area was further analyzed, and became a separate area of critical environmental concern/research natural area proposal from the Pacific Crest Trail proposed area of critical environmental concern.*

The new boundaries for the proposed Old Baldy area of critical environmental concern/research natural area have been field identified and entered into the resource area Geographic Information System data base. The northwest portion of the proposed Old Baldy area of critical environmental concern/research natural area overlaps with a portion of the proposed Pacific Crest Trail area of critical environmental concern (approximatley 150 acres).

572 **COMMENT** Your wilderness designations fall to adhere to the criteria in the Wilderness Act and FLPMA which you should use to guide proposed designations.

RESPONSE *Public lands in Oregon, including the lands within the Klamath Falls Resource Area, were inventoried for wilderness and Chapter 2 Wilderness Study Areas for a description of the inventory, recommendations, and management policy for the Mountain Lakes Wilderness Study Area. The information contained in the Wilderness sections of the resource management plant are summarized from the Oregon Wilderness Environmental Impact Statement and Wilderness Study Report. These documents followed the requirements of the Wilderness Act of 1969 and the Federal Land Policy and Management Act of 1976.*

573 **COMMENT** Page 2-5, 1st paragraph: Permanent roads and trails could be closed to prevent casual use... Casual use is the primary purpose of these facilities. If they are closed they are not permanent. Closure of permanent facilties that have been constructed with public funds is an abuse of fiscal policy and must not be done.

RESPONSE *See the response to comment number 452. In addition, roads that are blocked by gates or dirt/rock berms are available for nonmotorized travel such as hiking, horseback riding, or mountain biking. These roads are, therefore, still considered permanent facilities and available for public use.*

574 **COMMENT** What are the criteria for visual resource mangement classifications and why is the Upper Klamath River Gorge not listed under the VRM class I category?

RESPONSE *Refer to Chapter 2, Visual Resources section, for the visual quality objectives for BLM administered land by visual resource managment class. Only rivers designated wild under the National Wild and Scenic Rivers Act would be managed for Visual Resource Management Class I. The Klamath River, found suitable for Scenic designation, would be managed for Visual Resource Management Class II.*

Reprinted Letters

The letter reprinted in this section do not represent all the letter received by the Klamath Falls Resource Area during the draft Resource Management Plan/Environmental Impact Statement comment period. Due to the large volume of letters received the letters reprinted here are only from federal, state, tribal, and local government entities and elected officials. This should not be construed as meaning that letters from individuals, groups, and organizations were given less consideration in the comment analysis process. The decision to reprint some and not all of the letters was based on saving space and taxpayer money. All of the letter received during the comment period are on file at the resource area office and are available for public review.

L-0084

Klamath County ~ Board of Commissioners
COURTHOUSE ANNEX — 305 MAIN ST. — 503-883-5100 — KLAMATH FALLS, OREGON 97601-6391
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16 '92

[illegible]

November 13, 1992

Barron Bales, Area Manager
Bureau of Land Management
Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, OR 97603

Subject: Klamath Falls Resource Area RMP/EIS

Dear Mr. Bales:

The Bureau of Land Management (BLM) has embarked on the preparation of a Resource Management Plan and Environmental Impact Statement (RMP/EIS) for the Klamath Falls Resource Area. Since BLM lands constitute a large portion of County Lands, we have a strong interest in the BLM's plans. Based on our review of the plans, we have serious concerns over the consistency of the BLM's plans with the established land use planning efforts of Klamath County. These concerns are principally related to three areas:

1. Federal enabling legislation gives counties an equal role in federal land use planning efforts. The BLM has been directed to seek consistency with local planning efforts regarding those areas over which it conducts its land use planning efforts. It appears that the BLM staff in its selection of preferred alternatives has ignored this doctrine. The draft plan does little more than acknowledge the County's comprehensive plan. To our knowledge, no efforts have been undertaken to seek input of the County to achieve consistency with the County's land use plan. Requesting our review as simply another general member of the pubic after a near final document is distributed is not an acceptable means of achieving a consistent plan.

2. The County has recently adopted an Interim Land Management Plan which clearly needs to be addressed by the BLM.

3. Another example of the problems caused by the BLM's lack of cooperative planning pertains to air quality issues. Klamath County has serious EPA air quality problems due to smoke from wood fires. The County has worked diligently to address these problems in its local implementation plan which has not ever been acknowledged in the BLM's RMP/EIS process in spite of the fact that the preferred alternative would add 17 tons of fuel to be burned. If a potential public health problem this serious is ignored in the BLM plan, clearly there are many other inconsistencies to address.

L-0084

Klamath County is concerned that the BLM is on track to complete its land use plan in a manner that ignores or is inconsistent with the extensive local planning efforts.

We request the BLM pause now in its planning efforts and create an opportunity for the County and the BLM to review the joint planning issues which cannot be addressed in a piecemeal fashion. Pushing an uncoordinated plan through the RMP and EIS process without considering the County's land use plans could place the County in a legal adversarial position with the BLM, which is not in either or our interests. Ultimately, such actions would cause far more delay than a respite from the current draft review schedule to allow proper coordination with the County.

The County is willing to meet with the BLM on these planning coordination issues.

Sincerely,

BOARD OF COUNTY COMMISSIONERS

Harry Fredricks
Harry Fredricks, Chairman

Edwin Kentner
Ed Kentner, Commissioner

Wes Sine, Commissioner

Dave McTeague
STATE REPRESENTATIVE
District 25
Milwaukie, Oak Grove, Clackamas, SE Portland, Mt. Scott,
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COMMITTEES
Trade and Economic Development
Housing and Urban Development
Fish and Wildlife Caucus
Tourism Caucus

December 9, 1992

L-0383

Barron Bail, BLM Area Manager
2795 Anderson Avenue
Klamath Falls, Oregon 97603

Dear Barron,

I am writing in strong support of the BLM's decision to recommend protection of the Upper Klamath River. I urge the BLM expedite its Wild & Scenic River recommendation to Congress.

Having rafted this section of river, I can attest to the outstanding whitewater and recreational values.

As a member of Oregon Trout and Immediate Past President of the NW Steelheaders, I can also tell you that the native trout resources in this stretch are valued and highly recognized by anglers across this state.

Oregon's river systems are already overdeveloped and abused as a result of decades of impoundments and human and livestock overuse of riparian resources. Allowing the Salt Caves dewatering of this stretch of outstanding river is simply going too far.

Please help us stop the Salt Caves project. Please support Alternative E in the Klamath Falls Resource Management Plan.

Thank you.

Sincerely,
Dave
Dave McTeague

CC: Congressman Ron Wyden
Congressman Mike Kopetski
Oregon Rivers Council
Dean Bibles, BLM

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L-0558

December 16, 1992

Mr. Barron Bail, Resource Area Manager
Bureau of Land Management
Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, OR 97603

Dear Mr. Bail:

We welcome this opportunity to provide written comments on the Draft Resouce Management Plan and Environmental Impact Statement for the Klamath Falls Resource Area.

Purpose of O&C Lands

By way of introduction, the Association of O&C Counties (Association) is an organization whose membership includes all 18 Oregon counties in which the 2.5 million acres of Oregon and California Railroad Revested Grants Lands are located. In order to understand the Association's point of view relative to the management of resources on these lands, it is necessary to briefly recount the unique history of these lands, which were set aside long ago for the purpose of providing local community stability through the dominant use of these lands for timber production.

Beginning with the 1866 grant, the Revestment Act of 1916, and the 1937 O&C Organic Act through the present, these lands have been statutorily recognized as having a local purpose and they are to be managed for the stability of local communities and industries through the production of timber under the principles of sustained yield.

The 1937 Act directs the Department of the Interior to manage these unique lands under the conservation principles of sustained yield primarily for timber production and only secondarily for other, limited purposes listed in the Act. The Federal Land Policy and Management Act of 1976 (FLPMA) specifically exempts the O&C lands from the provisions of FLPMA in the event of conflict with or inconsistency between FLPMA and the O&C Act insofar as they relate to the management of timber.

The dedication of these lands to local purposes has inspired the counties, since 1953, to forego one-third of their statutory share of receipts (50 percent instead of 75 percent) through annual riders on Department of the Interior Appropriations Acts. The counties' annual relinquishment of one-third of their statutory entitlement has been based on the understanding that the foregone county monies would be appropriated for protection and intensified sustained yield timber production. This money was "invested" by the counties with the expectation that they would receive a "return" on their investment through increased harvest levels in future decades. Nearly one billion dollars of otherwise county revenue has been so appropriated since 1953. The federal government has, until recently, lived up to its part of the bargain, too. The result is that a highly productive, well-balanced forest has evolved that is second to none in the world. It has been estimated by the BLM that there was approximately 50 billion board feet of merchantable timber on these lands in 1937. The latest inventory stands at 49.7 billion board feet. With over 40 billion harvested since 1937, surely something has been done right and the concept of sustained yield timber production has been proven.

Judicial Affirmation of O&C Act

Recent judicial opinions have affirmed that the O&C lands are reserved for purposes different from other federal lands. Other federal lands are typically managed to accomplish national objectives. The O&C lands are to be managed for the benefit of the local economy and to promote community stability. Timber production is the dominant use for these lands.

This policy has been clearly and unmistakably confirmed by the U.S. Ninth Circuit Court of Appeals in the 1990 case, Headwaters vs. BLM. In that case, the Ninth Circuit stated, "...Nowhere does the legislative history [of the O&C lands] suggest that wildlife habitat conservation or conservation of old growth forest is a goal on a par with timber production, or indeed that it is a goal of the O&C Act at all."

This position has been clearly stated in previous cases by the Ninth Circuit. In 1987, the Court acknowledged "...the primary use of the revested lands is for timber production...." O'Neal vs. U.S.

This ruling was consistent with the prior statement of the Court that "[i]n 1937 Congress passed the O&C Sustained Yield Act...which provided that most of the O&C lands would henceforth be managed for sustained yield timber production." Skoko vs. Andrus.

In 1986, the Solicitor of the Department of the Interior rendered an opinion dealing with the O&C lands, in which he said, in part:

> "The freedom conferred to the Secretary [of the Interior]...is limited in one important way on certain federally-owned timberlands in western Oregon. There, any decision about managing northern spotted owls must be measured against the dominant use of timber production.
>
> "Plainly, on lands subject to its provisions, the O&C Act creates a dominant use--the production of timber on a sustained yield basis.
>
> "In deciding whether to establish a program for managing northern spotted owls on O&C timberlands, the Secretary, then, must first decide if it is possible to do so without creating a conflict with the dominant use there--timber production... If a program for managing northern spotted owls conflicts with producing timber on a sustained basis in O&C timberlands, the O&C Act will preclude the application to that realty. As the O&C Act instructs, on revested or reconveyed realty classified as timberlands in western Oregon, timber production is dominant." [Emphasis added.]

The Association is concerned that the DRMP/EIS contains no mention of this critically important history, nor make any reference to the important judicial decisions which have been handed down relative to the O&C lands over the years. In fact, except for a listing in Appendix 1-A, the document all but ignores the O&C Act.

Social and Economic Consequences

The Association is also very apprehensive about severe economic and social consequences which would follow from a decision by the Bureau to manage the O&C lands as set forth in the Preferred Alternative (PA) in the DRMP/EIS. Many of Oregon's communities will be devastated if the Allowable Sales Quantity (ASQ) on the O&C lands are reduced as proposed in the Preferred Alternatives for the various planning areas. Thousands of individuals will be thrown out of work and the ripple effect throughout these timber communities will be devastating. In addition, the revenues flowing to the 18 counties from sales of timber off these lands will be correspondingly reduced. At the very time when local governments need additional funds to deal with the tremendous human costs of reduced O&C harvests, those governments will have fewer funds available to meet the needs. This severe problem would coincide with rising adverse impacts from the recent property tax limitation provision of the Oregon constitution, which limits the ability of local government to raise revenues to replace lost O&C monies or other decreasing monies. (This results from the fact that many O&C counties receive a very small portion of the $10 per thousand dollars of assessed valuation available to all local governments because of their lesser dependence on property taxes historically.) This Association and the Association of Oregon Counties commissioned an analysis of the social impacts of timber harvest reductions in the O&C counties with Dr. Robert Lee of the University of Washington. (Lee, L. G., P. Summers, H. Birss, C. Nelson and J. Zientek, Social Impacts of Alternative Timber Harvest Reductions in the O&C Counties. University of Washington, 1991). Among Dr. Lee's many important findings were that the incidence of spouse or child abuse, alcohol or drug abuse and other manifestations of social stress increase in response to rising unemployment, at the same time that local providers of services in these areas find themselves with diminished capacity to respond to those in need.

Dr. Lee's findings also discuss the impact of unemployment on individuals and suggested that the quick fix of timber worker retraining advocated by many may be easier said than done. He stated, "People experiencing high levels of stress often suffer from impairment of the cognitive functioning required for retraining or making other changes in their lives. Extreme work-related stresses can produce symptoms resembling the 'delayed stress syndrome' from which so many Vietnam veterans suffered. When coupled with stress originating from the blaming of loggers and other wood products workers, loss of way of life, and betrayal by government, many individuals are likely to suffer from both a loss of self-esteem and an impaired capacity to recover. Their capacity to make rational decisions about retraining, moving, or shifting occupations can be substantially reduced by such an accumulation of stress."

But, assuming that the individual displaced worker is able to work his way through and resolve these problems, there are still severe difficulties in viewing "retraining" as the complete solution to the social and economic problems likely to result from the reduction in the ASQ as proposed in the Preferred Alternative. The facts concerning retraining contained herein are discussed more fully in a memorandum filed with the Endangered Species Committee (ESC) on Febraury 18, 1992, titled "O&C Counties' Post-Hearing Memorandum in Support of Exemption Requested by BLM." Affidavits and exhibits in the record of the ESC hearings substantiate the points raised in these comments. The BLM is already in possession of these supporting materials.

Of the thousands of timber and wood products workers who have lost their jobs in the last three years, most have been unable or unwilling to obtain job retraining. There are insufficient funds to serve those currently unemployed and additional funding in significant amounts is unlikely to serve a flood of newly unemployed.

The typical worker who actually is able to enter a job retraining program is male, 43 years of age, has been in the wood products industry for over 16 years, and has a 12th grade education. Thirteen percent of those who entered such programs are high school dropouts and another 12 percent are over 55 years of age. Many workers laid off from the timber and wood products industry have spent their working careers in that industry and have lived their entire lives in communities where the wood products industry is economically and culturally dominant.

Of those who do make their way into job retraining programs, the placement success has been relatively good. Any increases in unemployment, however, will result in a reduced placement rate. One expert has stated, "Dislocated workers are already being absorbed into the job market at nearly the maximum rate possible--the job market is already saturated with dislocated workers, whether retrained or not."

In addition, for those who make it into retraining, then complete retraining, and are placed, there is almost always a substantial reduction in wages from those earned in the wood products industry. In Lane County, the average is a $2.00 per hour reduction. In Douglas County, the average is a $3.50 per hour reduction. In Coos County, the average wage reduction for those lucky few who make it into and out of retraining is $4.64 per hour.

The costs of retraining are substantial. The most obvious costs are the direct retraining costs. These range from $3,500 to $5,449 per worker trained. Other costs include PELL grants, which run from a few hundred dollars to $2,600 per worker trained, and unemployment benefits, which normally are $259 per week for anywhere from 10 weeks to 39 weeks, to exhaustion of benefits. In Coos County, the average time on unemployment is 32 weeks; that is expected to increase to 48 weeks in 1992.

From the foregoing, the following conclusions are inescapable:

- Funding is adequate to provide retraining to only one-third to one-half of those currently unemployed.
- Substantially increased funding is not available.

- For those who are served, the job placement rate may decline in the future.
- Any increase in unemployment will be met with lower retraining success rates.
- Those who are placed in new jobs suffer substantial wage reductions.
- Job retraining is expensive.

These are very real and severe economic and social consequences and all effort should be made to mitigate against these impacts.

Recommendation for Proposed Action

The O&C Act, its history, and the judicial decisions which have been rendered relative to it and the impact on local government revenue and services, lead us to the conclusion that the most appropriate alternative for the Bureau to select for the Proposed Action is Alternative B. Essentially, this would continue the current land use allocations coupled with the advantage of an updated timber inventory. We urge you to give Alternative B careful consideration when deciding upon the Proposed Action for your Resource Management Plans.

However, if it is determined that compliance with the Endangered Species Act (ESA) precludes the adoption of Alternative B, the Association can reluctantly accept the Preferred Alternative on the condition that certain changes are made to provide for an increase in the ASQ. We condition our support of the Preferred Alternative because of our view that the Preferred Alternative goes beyond the requirements of the ESA and represents an exercise of discretion by the BLM that is not allowed by the O&C Act. It is our firmly held position that the O&C Act requires that the timber harvest be set at the highest sustainable level to meet the statutory requirement for community stability and that deviations from such harvest level can only occur in response to other mandatory federal laws such as the ESA. While we are not opposed to management for non-timber values, such management should occur within this framework. As it stands, the Preferred Alternative does not appear to recognize the constraints of the O&C Act, nor does it appear to solely couple reductions in harvest levels with the requirements of the ESA.

All this having been said, it may be that the philosophy of the Preferred Alternative, "ecosystem management," can still be utilized within the proper statutory framework. This would depend in large part on whether harvest levels under the Preferred Alternative could be increased to bring them more closely in compliance with the harvest levels required by the community stability requirements of the O&C Act, while not exceeding

restrictions imposed by the ESA. This would require a very careful balancing of obligations by the BLM.

Opportunities to Increase Allowable Sale Quantity

Based upon our review of the information set forth in the DRMP/EIS, we believe strongly that several opportunities do exist for moderate increases in the ASQ to the point where the required balance might be achieved. These opportunities relate to the allocation and management of riparian areas, the choice of minimum harvest age, adoption of departure from the nondeclining harvest level, and updating the timber inventory. The increase in ASQ to be expected from these opportunities should serve to lessen the impact on timber dependent communities of the precipitous drop in ASQ proposed in the Preferred Alternative. The increases, if sufficient, would also serve to insure that management is in compliance with the O&C Act. These opportunities, and projected increase in ASQ, can become reality within the planning guidance through modest changes in such guidance without upsetting the basic concept around which the Preferred Alternative was designed. We have requested the State Director to make such changes in the State Director Guidance. Each of the opportunities will be discussed separately.

Riparian Management Areas (RMA)

We see an opportunity for change within the Preferred Alternative guidance for riparian area protection to provide for an increase in the ASQ. Under Preferred Alternative guidance applicable to riparian areas, some 3,969 acres have been allocated to RMAs and thereby segregated from acreage available for programmed timber harvest on a sustained yield basis. This large acreage dedicated to riparian area protection amounts to a 73 percent increase in the acreage allocated for similar purposes under the current plan. According to the DRMP/EIS, all alternatives meet the minimum legal requirements for the protection of riparian areas, thus as few as 2,299 acres of RMAs as designated in Alternative A meet legal mandates. This being the case, it appears that the allocation of 3,969 acres to RMAs, as proposed in the Preferred Alternative, amounts to significant overprotection of one resource to the detriment of another. We suggest that a more reasonable and balanced approach would be to substitute Alternative A guidance for Preferred Alternative guidance with regard to RMAs allocations. If Alternative A guidance were used, some 1,670 acres of forest land could be restored to the sustained yield timber production base. We have recommended to the State Director that Alternative A guidance for RMA be adopted for the proposed Resource Management Plans (RMP).

We have also suggested to the State Director that guidance with respect to programmed timber harvest activities within the RMAs be re-examined. As we understand the guidance, the only timber harvest permitted within RMAs is harvest of trees in support of resources other than timber and for limited crossings of RMAs for logging roads and yarding roads. In other words, acreage within RMAs is not included in the base acreage used to compute the ASQ, and a programmed timber harvest will not be taken from RMAs. We wish to point out that the Oregon Forest Practice Act Rules provide for growing and harvesting timber within riparian management areas to the extent that certain standards of protection are met. The Oregon Forest Practice Act Rules contain very specific guidelines for the numbers and sizes of conifer trees to be left per 1000 feet of stream length for riparian management areas of varying width. While full sustained yield production is not possible under the state rules, at least some timber production is permitted. If silvicultural systems applicable to the Protected Habitat Areas (PHA) were applied to the RMAs, it is possible that the ASQ could be increased. As we understand, two key building blocks of the conceptual framework around which the Preferred Alternative was developed were that "resource use and protection can occur in harmony" and that "stewardship is essential to long term ecological health and social well being." You have implemented these concepts in your management program for the PHA and have provided for the programmed harvest of timber on a sustained yield basis from such areas. If the concepts of management noted above are appropriate for PHAs, then certainly the concepts are also appropriate for management of RMAs, including the programmed harvest of timber on a sustained yield basis. Therefore, we have recommended to the State Director that the guidance with regard to RMAs be amended to provide for programmed timber harvest from such areas subject to the rules for live tree retention set forth in the Oregon Forest Practice Act Rules.

In summary, if Alternative A guidance for RMAs were substituted for Preferred Alternative guidance to allow a reduction in acreage allocated to RMAs, and if such guidance were also amended to permit a programmed timber harvest from RMAs, such changes should result in an increase in the ASQ.

Departure from the Nondeclining Harvest Level

Departure from the nondeclining harvest level is not something that public land managers normally decide to do but there are times and circumstances when it may be the wise thing to do. We believe that now is the time to consider departure from the nondeclining harvest level in order to provide for a temporary increase in ASQ during the next decade.

The amount of forest land available for intensive timber production has been drastically reduced under the Preferred Alternative. Under the current plan some 75 percent of forest lands were dedicated to intensive timber management; the Preferred Alternative for the 1990's allocates NO forested acres to intensive timber management--a significant reduction indeed! The current ASQ for the Klamath Falls Resource Area is 19.0 MMBF; the ASQ proposed by the Preferred Alternative is 6.0 MMBF--a 68 percent reduction! Add to this scenario the reduction in timber output from the national forests in the vicinity and timber-dependent communities in southwest Oregon are faced with a dismal outlook for the future.

One way to help alleviate the situation, and to ease the impact of such a large reduction in ASQ, is to adopt departure from the nondeclining harvest level to permit a one decade increase in ASQ. Such an action would help provide for a transition from the high harvest levels of the 1980's to the reduced harvest levels projected for the future. We note that paragraph 3 of the March 15, 1983, O&C Forest Resources Policy Statement provides, as follows, for departure from the nondeclining harvest level:

> "3. The allowable cut determination shall be based on nondeclining harvest level over time. Departures from the nondeclining harvest level may be permitted in any direction. Any increase shall not exceed the long-term sustained yield capacity of the land; decreases shall be economically and/or biologically justified and timed so as to minimize impacts on dependent industries and communities." (Emphasis added.)

We do not know exactly how much the ASQ might be increased by departing from the nondeclining harvest level, but suggest that a 0.5 MMBF increase might be a reasonable estimate based on a departure of ten percent. We note that the original proposed State Director Guidance required a sensitivity analysis for departure from the nondeclining harvest level for the Preferred Alternative. However, this requirement was apparently dropped because the DRMP/EIS does not indicate that such an analysis was undertaken. It should be carried out to establish the level of increased ASQ.

We have recommended to the State Director that the guidance for the Preferred Alternative be amended to require departure from the nondeclining harvest level in order to add to the ASQ and contribute to community stability.

Updating Timber Inventory

The DRMP/EIS indicates that the inventory of forest lands to estimate the volume of timber present and the age class distribu-

L-0558

tion of such timber was current as of October 1, 1988, and that the timber inventory was updated current to October 1, 1990, for purposes of computing the ASQ for the various alternatives described in the DRMP/EIS. The updating was necessary to account for depletion of existing timber inventory due to timber sales and for accretion of timber inventory due to growth in order to arrive at an updated starting inventory for ASQ calculation purposes.

If the proposed RMP is implemented on October 1, 1993, as planned, five years will have passed since the timber inventory was completed. We recommend that the starting inventory for the purpose of calculating the ASQ for the proposed RMP be updated current to October 1, 1993. This should not pose a problem because of the fact that little or no timber is likely to be offered for sale during F. Y. 1993. Also, we wish to point out that for the past five years timber sale offerings have been substantially below the volume of timber that should have been offered for sale in accordance with the timber management plan approved in 1983. Therefore, it appears that accretion of timber volume will far exceed depletion of timber volume and hence the net effect should be a starting inventory volume substantially greater than the starting inventory volume used to calculate the ASQ for the various alternatives described in the DRMP/EIS. Because a higher starting inventory volume should have a positive effect on the ASQ, we emphasize the importance of updating the timber inventory to October 1, 1993.

Opportunities Summarized

This Association is very concerned about the large drop in ASQ proposed in the Preferred Alternative. We are not convinced that such a drastic reduction in ASQ is absolutely necessary. Rather, we do believe that there are ways to increase the ASQ above that proposed in the Preferred Alternative, and still adhere to the basic conceptual framework used to design the Preferred Alternative.

We believe that modifications to the Preferred Alternative with regard to riparian area protection, departure from the nondeclining harvest level, and updating the timber inventory to October 1, 1993, could add at the least an estimated 0.5 MMBF to the ASQ. As noted above, we have requested the State Director to revise the policy to permit the changes we have recommended.

An Item of Concern

We note with alarm the following statement included in the discussion of "allowable sale quantity" on page 2-65:

L 0558

> "To account for unidentified threatened and endangered species sites, special wildlife habitat, or other resource values, the ASQ for both west and east sides would be reduced by 5 percent. This would provide a reserve of unidentified acres set aside for protection of such resources without having to recalculate the ASQ."

The inclusion of this statement in the DRMP/EIS suggests a lack of understanding (or disregard) of the basic concepts guiding this planning effort, including the reasons for recalculating the ASQ on a ten-year cycle. The basic reason for recalculating the ASQ on ten-year intervals is to account for change during the ten-year period of the plan. Such changes could involve accretion or deletion of timber production base acreage; changes in level of growing stock documented through new timber inventories; changes caused by overcutting resulting from salvage operations triggered by fire or natural disaster or for undercutting resulting from periods when no timber sales are made, such as in the case today because of court-ordered injunctions; and for changes in estimates of growth and yield as evidenced by inventories and research.

The arbitrary reduction in ASQ for the reasons set forth in the above quoted statement is totally inappropriate and with justification either on a technical or policy basis. In fact, we wish to point out that the DRMP/EIS contains an elaborate process for monitoring the implemented RMP and a process for changing the plan should change be necessary. This process should not be preempted by the arbitrary procedure noted above.

Comments on DRMP/EIS

We have attached hereto comments specific to the DRMP/EIS for the Klamath Falls Resource Area, which are included in and make a part of this response by reference.

We are grateful for the opportunity to comment on these critically important issues. The future of much of western Oregon is dependent on the decisions which you and the other districts make relative to the management of these lands for the next decade.

Sincerely yours,

Rocky McVay
Rocky McVay
President

Attachment

L 0558

COMMENTS SPECIFIC TO:

KLAMATH FALLS RESOURCE AREA DRAFT RESOURCE MANAGEMENT PLAN

AND ENVIRONMENTAL IMPACT STATEMENT - AUGUST 1992*

VOLUME I

Summary

No comment.

Chapter 1

We were disappointed that the Draft Resource Management Plan and Environmental Impact Statement (DRMP/EIS) was published for public comment without a discussion of the O&C Sustained Yield Act of 1937 and the relationship of said Act to the Federal Land Policy and Management Act of 1976 (FLPMA). The O&C Act is a unique piece of legislation which has guided the management of the O&C lands of western Oregon for over 55 years. And as you know, the O&C Act was accorded a special exemption by Sec. 701 of FLPMA insofar as the management of the timber resource is concerned. The purposes of the O&C Act and the Sec. 701 exemption are very important to this planning effort and need to be discussed in these planning documents.

We believe this is important because the Resource Management Plan (RMP), once adopted, will become the blueprint for managing BLM lands in the Klamath Falls Resource Area for the next ten years. As new managers come upon the scene, their first action will be to become intimately familiar with the RMP in order to effectively carry out their duties and responsibilities. Without some discussion of the O&C Act in the RMP, the full significance of the O&C lands and the purpose of these lands will very likely be lost. This is of serious concern to the eighteen O&C counties, particularly after having invested nearly one billion dollars of county funds in the O&C lands during the past 40 years to pay for a level of intensive management that very likely would not have been undertaken otherwise.

We urge you to include a discussion of the O&C Act and its purpose in the plan. We suggest that you review some of the mailers published early on in this planning effort which discussed the O&C Act and the relationship to FLPMA. In our opinion, Chapter 1 seems to be the appropriate place to include such a discussion.

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*It is not our intent to make a detailed page by page review of the entire Draft Resource Management Plan and Environmental Impact Statement. Rather, we limit our comments to several specific items/concerns that we feel need to be addressed.

L 0558

Chapter 2

Included in Chapter 2 is a section entitled Cost of Management (page 2-76) which addresses in a very general way the costs likely to be associated with implementing the various alternatives. A distinction is drawn between "traditional timber management" and "non-traditional timber management" with the PA considered as non-traditional timber management. The discussion points out that costs of traditional timber management "would be consistent with past management costs for this purpose" but that "costs of non-traditional timber management as proposed in the Preferred Alternative....would be much higher per unit of timber sold than for the other alternatives." In fact, the document states that "preliminary cost estimates indicate that these costs, in the first decade, would be about 2.8 times traditional costs per unit output."

Unfortunately, the discussion of the cost of implementing the Preferred Alternative stops at this point and the reviewer is left to ponder the question of increased costs and the budget needed to implement the plan. We feel the abbreviated discussion of costs, particularly when costs of the Preferred Alternative are projected to be so much higher, is a serious oversight in the DRMP/EIS. We recommend that you remedy the oversight in the proposed RMP/FEIS with a full and complete discussion of the costs of management for the Proposed Action together with an estimate of the budget requirements needed to implement the plan.

Chapter 3

No comment.

Chapter 4

We applaud the approach taken by the Klamath Falls Resource Area to evaluate and quantify the effects that land use allocations and restrictions on timber management practices have on timber production. We suggest, however, that to facilitate an understanding of your analysis that the data generated be displayed in tabular form showing for the Proposed Action the acreage of suitable commercial forest land (SCFL) allocated for the purpose of enhancing or protecting resources other than timber together with an estimate of the reduction in ASQ attributable thereto. It seems that the starting point should be Alternative B (acres of SCFL and ASQ) with incremental reductions of SCFL and ASQ until the level of the Proposed Action is reached. We chose Alternative B as the base for comparison because Alternative B is the alternative which most closely reflects compliance with the purpose and intent of the O&C Action. See Exhibit 1 for an example of a table to array the data. We make this request because we believe that decision makers and the public need to know with some precision the

L0558

amount of timber production which will be forfeited in the enhancement and protection of resources other than timber.

Chapter 5

No comment.

Glossary

We note your continued reluctance to include the term "dominant use" in the glossary, even though this Association has pointed out the significance of the term in commenting on State Director Guidance and in commenting on the Klamath Falls Resource Area Analysis of the Management Situation. After all, the term "dominant use" has more relevance to the management of the O&C lands than does the term "multiple use" which has been included in the glossary. We urge you to add the term "dominant use" to the glossary for the RMP.

VOLUME II

Chapter 1

No comment.

Chapter 2

We suggest you include in Appendix 2-C a description of the procedures used to compute the allowable sale quantity for the Preferred Alternative (and/or Proposed Action). We believe this is necessary in order to describe how the following components were handled in computing the allowable sale quantity: (1) retention of a portion of the stand at harvest; (2) development of stands with multiple canopy layers; (3) maintenance of wider tree spacing by means of a series of density management cuttings; (4) management on longer rotations; and (5) expected timber yields from stands so managed.

Since the current timber volume for the Klamath Falls Resource Area is based on a 1988 timber inventory, we suggest you also include in Appendix 2-C a description of the procedures used to update the timber inventory to the present time and a tabular display of the results of the update.

Chapter 3

No comment.

L0558

Chapter 4

We suggest you include a sensitivity analysis in Appendix 4-A to determine for the Preferred Alternative (and/or Proposed Action) the ASQ for a departure of ten percent above the non-declining harvest level, provided that the resulting increase in ASQ does not exceed the long term sustained yield capacity. We suggest you also determine the highest level of departure permissible during the first decade which is within the LTSY constraint.

L0558

Exhibit 1

Effects on Timber Production Resulting From Enhancement of Other Uses

(Alternative B Compared to the Proposed Action)

		ASQ	
	ACRES (SCFL)*	MMCF	MMBF
Alternative B (Baseline)	52,191	2.352	13.09
Less:			
Air			
Soils			
Water Resources			
Biological Diversity			
Vegetation			
Riparian Zones			
Wildlife Habitat			
Fish			
Special Status Species			
Special Areas			
Cultural Resources			
Visual Resources			
W&S Rivers			
Recreation			
Energy & Minerals			
Rural Interface Areas			
Total Reduction			
Proposed Action			

*Available for intensive management.

L-0614

Klamath County ~ Board of Commissioners
COURTHOUSE ANNEX — 305 MAIN ST. — 503-883-5100 — KLAMATH FALLS, OREGON 97601-6391
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December 18, 1992

Mr. Barron Bail, Resource Area Manager
Bureau of Land Management
Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, Oregon 97603

Re: Comments on the Klamath Falls Resource Area Resource Management Plan

Dear Mr. Bail:

There are not sufficient advantages or benefits from the increase in Special Management Areas, Old Growth Emphasis Areas, and Connectivity Areas to offset the adverse economic impact caused by decreases in commodity outputs planned by the preferred alternative. There is no evidence that the BLM was required to change it's direction of purpose from that of community stability.

The Klamath Falls Resource Area is one of only two districts proposing to allocate large areas of commercial forest land to habitat uses, excluding timber production in the preferred alternative. This is counter to the desires of the citizens of Klamath County which is to maintain as large and as stable a commercial forest land base as possible. This desire was recently illustrated by the Klamath 2002 Forest Resource Committee's vision statement - "By the year 2002, all forest land not established as National Park or wilderness will be actively and prudently managed for optimum resource use, consistent with long term carefully defined economic, social and biological objectives." The desires of the citizens of Klamath County were further stated in the 1992 Klamath County Interim Land Management Plan unanimously adopted by the Commissioners that states in part - "Klamath County promotes multiple use of public forest resources to realize sustainable and continuous provision of timber, forage, firewood, wildlife, fisheries, recreation and water. Such sustainable levels assume that minimal lands be given single use or restrictive designations and that the maximum areas of land be outside wilderness areas and be available for active, intensive management."

The "rural interface" concept to provide buffers to property owners of less than 20 acres is another defacto withdrawal of land allocated for timber production that is contrary to the desires and needs of the citizens of Klamath County. Adjacent private property owners that are zoned for forestry need not provide buffers for

L-0614

commercial activities, nor should 3,000 acres of public forest lands in Klamath County sacrifice commercial output for buffers. Klamath County Zoning Ordinance Article 55, Section 55.080 (C)(2) addresses this issue by stating "a written statement is recorded with the deed or when a written contract is executed with the county which recognizes the rights of adjacent and nearby land owners to conduct forest operations consistent with the Oregon Forest Practices Act, or to conduct accepted farm practices". The language in this ordinance comes directly from the property function of County government, not the Federal government or the Bureau of Land Management.

The timber output in the preferred alternative in the August 1992 draft of the Klamath Falls Resource Area indicates the highest percentage reduction in the state. Much of this is due to single purpose and restrictive designations of lands that is contrary to the desires and needs of the citizens of Klamath County. Preliminary analysis by our Local Resource Control Task Force indicates that the reduction in timber output from Alternative "A" or "B" to the "Preferred Alternative" will cost the community between 153 and 173 jobs (direct, indirect and induced). The average household in Klamath County has 2.54 members - the total impact could be from 400 to 440 family members losing their means of support.

As Commissioners, we have concerns about the legal sufficiency of this "new philosophy" in meeting the O & C Act, as it represents significant changes in BLM management. The O & C Act provides "for permanent forest production..." Over 30% of the Klamath County budget is derived from timber receipts (National Forests, O & C, Severance, etc.) and there is no way we can replace these revenues with increased property taxes. As one of the 18 members of the Association of O & C Counties, we generally support their selection of Alternative "B" as the preferred alternative, but we are concerned about the 20% decrease in livestock grazing from Alternatives "A" to "B".

It is most important that the needs and desires of the people directly affected be met by new plans, and Alternatives "A" and "B" come the closest to meeting these needs.

BOARD OF COUNTY COMMISSIONERS

Harry J Fredricks
Harry Fredricks, Chairman

Edwin Kentner
Ed Kentner, Commissioner

Wes Sine, Commissioner

L-0615

Klamath County ~ Board of Commissioners
COURTHOUSE ANNEX — 305 MAIN ST. — 503-883-5100 — KLAMATH FALLS, OREGON 97601-6391
MAIL: 403 PINE STREET, SUITE 300 FAX # (503) 883-5163

December 21, 1992

Ms. Judy Nelson, District Manager
Lakeview District Bureau of Land Management
c/o Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, OR 97603

Subject: Klamath Falls Resource Area - Resource Management Plan and Environmental Impact Statement

Dear Ms. Nelson:

In the letter from the Klamath County Commission of November 13, 1992, the County indicated its concerns regarding your Resource Management Plan for the Klamath Falls Resource Area. Enclosed for your reference is a copy of that letter. As of this writing, I have seen no response to that letter.

My concerns, in addition to the specific problems noted in the Commission's letter, include the following:

- Lack of consistency between your preferred plan and the County Comprehensive Land Use Plan, and the Klamath County Interim Land Management Plan;
- Lack of consideration of an alternative plan which has, as its goal, consistency with the County's plans;
- Failure of the preferred plan to develop recreation or other alternative employment to replace the acknowledged employment reductions attendant to your preferred plan;
- Failure to consider development of a preferred plan which minimizes the negative impact on tax revenue at a time when local government is losing revenue base at the federal and state level from other sources; and
- General lack of coordination with the County in soliciting specific input to selection of a preferred alternative.

These concerns are addressed more specifically in the enclosed comments.

L-0615

I understand the challenge associated with undertaking a planning effort as substantial as that underway by the BLM. However, given the number of years this plan has been underway, the short time allocated to review your preferred alternative, the lack of consideration of County input to the selection of that alternative seriously undermines the value of your planning process. To avoid undue opposition and challenges on procedural or equity bases, I request BLM to provide an opportunity to work with the County staff to establish a preferred alternative which has less impact on timber revenue, more specific proposals or commitments to recreation enhancements, greater flexibility with regard to consideration of future grazing permits rather than blanket prohibitions, and greater flexibility for use of the upper Klamath River Canyon for responsible water resource development rather than prohibiting development of this already altered stretch of the river. I believe it would take approximately three to six months to have adequate meetings with BLM staff, obtain focused and meaningful input by affected parties, and establish a preferred alternative that meets the needs of the BLM, the County, and the parties affected by future use restrictions on BLM lands within the Klamath Resource Area.

Sincerely,

Wes Sine
Commissioner

Enclosure

cc: Honorable Mark Hatfield
Honorable Robert Packwood
Honorable Michael Kopetski
Honorable Robert F. Smith
Dean Bibles, State Director, BLM

L-0615

COMMENTS AND CONCERNS OF KLAMATH COUNTY COMMISSIONER WES SINE REGARDING THE BUREAU OF LAND MANAGEMENT DRAFT RESOURCE MANAGEMENT PLAN AND DRAFT EIS FOR THE KLAMATH FALLS RESOURCE AREA

The following, combined with the County Commission's letter of November 13, 1992, and the most recent Commission comments are the comments and concerns of Commissioner Wes Sine with regard to the subject Resource Management Plan (RMP) and associated draft environmental impact statement. In the interest of brevity, I have provided a summary of concerns, rather than providing comments in detail. As the unit of local government with the most comprehensive plans for lands surrounding the federal lands subject to the BLM RMP, I believe such comments and concerns are better resolved staff to staff. However, to the best of my knowledge, no opportunities for such a staff working session has been available. Given the many demands upon the County to undertake planning and implement plans, time is at a premium to coordinate with the BLM to achieve compatible plans. No effort has been made, however, by the BLM to achieve such cooperative planning, and insufficient time now remains to undertake that planning, absent a change in the BLM's schedule. For the reasons summarized below, I believe additional time is needed to perform the requisite cooperative planning.

The BLM RMP has given little consideration to the County's land use plans. Furthermore, prior to the release Draft RMP/EIS, the County adopted the enclosed Klamath County Interim Land Management Plan, in July 1992, which is not acknowledged or addressed in any of the alternatives included in the RMP. The County has offered to meet with the BLM staff to address the inconsistencies in the plan, but no response has been received. It would be far more productive to work out these differences in the development of the BLM's preferred plan alternative, but no opportunity for input to the selection of the specific actions or policies to be included in the preferred alternatives were offered to the County.

Inconsistencies with the County's Interim Land Use Plan include:

- **Land Disposition Policy**: The County's policy is that federal agencies not acquire private land or land rights without ensuring parity in land ownership is maintained and land use goals of the County are maintained. The BLM has announced, informally, its intent to acquire, as a part of the RMP, a large land block near Agency Lake, but has provided no information on the plans, no analysis of the effects of such acquisition, and no evaluation of the consistency of such acquisition with the County's plan. Such lack of coordination, in and of itself, is inconsistent with the County's plan. Evaluation of the acquisition could also prove a land use inconsistency as well.

L0615

Federally managed lands that are difficult to manage or lie in isolated tracts are to be targeted for disposal. I see no evidence in the RMP or EIS of the BLM having assessed lands that could be so targeted for disposal.

It is County policy that all federal agencies shall review their lands to ensure that the original objectives for which these lands were acquired or withdrawn are being served. Clearly the lands withdrawn for power resource development within the Klamath Canyon would not be used for their intended purpose with the BLM's preferred alternative, which would seek federal wild and scenic status for the canyon. This is inconsistent with County policy. The BLM's plan is similarly inconsistent with timber land withdrawals.

It is County policy that prior to federal land agencies changing land use, impact studies on uses be conducted and mitigation measures be adopted in coordination with the County. No such coordination has occurred and no mitigation measures for loss of tax revenue, loss of employment nor loss of economic activity have been developed in the documents that have been release to the public.

- **Water Resource Policy:** County policy calls for any federally proposed designation of Wild and Scenic Rivers and all federal policies regarding riparian management in Klamath County to be coordinated with the County. The BLM has consistently disregarded the County's policy toward Wild and Scenic designation of the Upper Klamath River. This disregard continues with the draft RMP, despite the failed efforts of the BLM to achieve Congressional approval of Wild & Scenic designation in 1991, after a full consideration of this issue before the House Interior Committee. A BLM policy to manage the canyon as though it were designated Wild and Scenic is against County policy, and has proven not to be supportable by Congress.

  The County, by policy, actively promotes the study and development of current and potential water sources and storage to provide water for attainment of Goals 3, 5 and 9 of the land use plan (agriculture, open spaces etc, and economy of the state, respectively). The BLM's preferred plan is inconsistent with this policy and objective due to the proposed Wild and Scenic designation.

  The County, by policy, protects existing water rights such that no transfers of water rights or state or federal actions diminish water usage and custom within the County. The BLM plan, through Wild and Scenic designation would threaten future water use and water rights.

  The County is to be notified of all federal actions that have any impact on water of the County prior to such actions being initiated. The BLM plan fails to

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L0615

acknowledge the impact on future uses of water in the Klamath Basin, and the inconsistencies of the BLM's preferred plan and the Klamath River Compact in its RMP and supporting EIS. This is against County policy.

  Water use policies reviewed and developed by the County must ensure water quality and quantity and ensure that policy is consistent with the priority of uses in the Klamath River Compact. The BLM's plan ignores the Klamath River Compact, failing to address any aspect of the Congressionally approved Compact. The plan, if adopted, also revises the priority of water uses through management of the river as though it were designated Wild and Scenic, creating recreational uses as the first priority, in contravention of the Klamath River Compact. This is also against County policy.

- **Agriculture Policy:** County policy calls for agriculture on federal and state lands to continue at levels consistent with historical custom and culture. The proposed BLM plan reduces grazing, silviculture, and could also threaten other agricultural practices in riparian areas without creating offsetting opportunities elsewhere. This is a reduction of historical uses and customs and is against County land use policy.

  County policy includes preserving maximum amounts of supply of grazing lands, farm lands and economic land units. The BLM plan reduces grazing lands, threatens farm lands, and through precluding any water resource development on the Upper Klamath River, threatens future water supply for agriculture dependent upon the river.

  The County policy supports multiple use and highest and best use of waters for agriculture production. The BLM plan, through Wild and Scenic designation creates recreation as the highest and best use, in contravention of County policy

- **Forestry and Forest Products:** County policy promotes multiple use of public forest resources to realize sustainable and continuous provision of timber, forage, firewood, wildlife, fisheries, recreation and water. The County policy endorses maximizing land acreage outside Wilderness Areas and maintaining land to be available for active, intensive management. The BLM's proposed designation of Wild and Scenic status and various adoptions of the status of Area of Critical Environmental Concern is counter to County policy, unless equal amounts of other lands are made available for similar uses to those uses precluded from such designation.

  The County supports transportation of logs and manufactured forest products over federal roads within the County. The BLM's plans to reduce vehicular traffic on certain federal roads appears counter to this policy, and there is no

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L0615

apparent evaluation in the draft EIS of the cumulative effect of the road closures on forest products transportation.

- **Cultural Resources, Recreation, Wildlife, Fisheries and Wilderness:** The County policy allows it to adopt specific protections and recovery plans for Threatened and Endangered Species. The County is concerned about resolution of the Threatened Lost River Sucker and Short Nose Sucker in Upper Klamath Lake and Upper Klamath River. The BLM's proposed designation of the Upper Klamath River as Wild and Scenic precludes water resource supply development alternatives on the river as potential solutions to the water supply problems directly related to the habitat problems associated with these protected species. The BLM's plans, therefore, could unilaterally preclude a key aspect of a future recovery plan the County could develop. Such restrictions on rational water resource development to solve the sucker species problems could also be counter to the federal Endangered Species Act, but there is no assessment of this issue in the RMP or supporting draft EIS.

  The County requires coordination of federal and state land agency wildlife and fishery management. There has been no such coordination by the BLM on the 212,000 acres of land subject to this plan in the preparation of the plan and the adoption of the preferred alternative. This is directly against County policy and standard intergovernmental agency courtesies.

  County policy states that the federal government shall not unreasonably obstruct historic American Indian cultural activities on their respective lands. The draft RMP contains no analysis of the effect of various federal road closures, vehicle restrictions and riparian area designations as Areas of Critical Environmental Concern on the ability of Native Americans to have access to their lands.

The BLM's alternative plans should be evaluated against all of the above policies before a preferred plan is suggested for review by the public. Where there are inconsistencies with County policy, the BLM should, at a minimum, consult the County for alternatives to avoid the policy violation, or minimize the contravention of County policy. Absent such coordination and associated reconsideration of the BLM's preferred plan, the County's ability to carry out land use planning and land use permitting in accordance with its own policies could be seriously constrained. There is no recognition of this major planning inconsistency in the BLM's documentation on the Klamath Resource Area RMP. Adequate time should be given for this coordinated review to take place before a preferred plan is distributed for public consideration.

L-0617

Klamath County Farm Bureau
4240 Highway 39
KLAMATH FALLS, OREGON 97603

December 18, 1992

Ms. Judy Nelson
District Manager
Lakeview District Bureau of Land Management c/o
Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, OR 97603

Subject: Klamath Falls Resource Area Resource Management Plan and Environmental Impact Statement Comments

Dear Ms. Nelson:

The Klamath County Farm Bureau has reviewed the Draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the Klamath Falls Resource Area. We have three primary concerns over the Draft RMP/EIS. First, the determination that in the Preferred Alternative a designation of the upper Klamath River as a Scenic River area and that determination's potential affect on future agriculture. Second, that the Preferred Alternative was selected by the Bureau of Land Management (BLM) staff without public involvement or review of alternative. Finally, the decision to eliminate the effects on agriculture from the BLM's planning study.

The BLM continues to pursue the consideration for designating the upper Klamath River as Scenic without regard to the effect such a designation will have on the agriculture in the Klamath Basin. The operation of the Klamath River as a multiple use resource is a significant component of the agricultural economy throughout in the Klamath Basin. Agriculture plays a vital role in the economy and a Scenic designation would conflict with the irrigation uses provided by the Bureau of Reclamations Klamath River Basin Project.

L0617

A federal designation on the Klamath River would effectively lock up the present level of appropriations and allow for no additional appropriations or water storage in the Klamath Basin. The Diack Case established that appropriations apply upstream of the designated area as well as from the designated area itself. Thus, under a Wild and Scenic River designation, the Klamath Basin would lose the flexibility for future water needs and agriculture development because of the limits on water appropriation that would preclude and restrict the ultimate domestic and irrigation development. The situation will be particularly critical during drought periods like those that have persisted throughout Southern Oregon over the last five years. Thus, Wild and Scenic designation will severely restrict the vital role that agriculture plays in the already struggling Klamath area economy because it limits the much needed flexibility for water use throughout the Klamath Basin. The Klamath County Farm Bureau strongly suggests that the BLM allow for review of the six alternatives (No-Action and Alternatives A-E) prior to the selection of its Preferred Alternative. These alternatives are documented in the Draft RMP/EIS and ostensibly selected to cover a range of federal land use from no change to existing practices (No-Action Alternative) to highly restrictive use of federal resources (Alternative E). This evaluation was conducted across the 13 resource issues listed below:

- Timber production practice, old growth forest and habitat diversity;
- Threatened and endangered species;
- Special areas;
- Vital resources;
- Watershed;
- Streams;
- Riparian areas and water quality;
- Recreation resources and tourism;
- Land tenure and access;
- Rural residential management areas;
- Wild and scenic;
- Salt Caves Hydroelectric Project; and
- Livestock grazing.

L0617

The evaluation of these resource issues for six alternatives creates a highly complex set of resource management issues. The effect of these issues on the Klamath area, particularly with the respect to the local economy, deserves detailed scrutiny by those affected. We believe the public should be given a special opportunity to review those alternatives and their impacts and be allowed to submit comments that ultimately would be used to prepare a Preferred Alternative for the Klamath Falls Resource Area. The current approach allowed for the BLM staff and resource specialist to evaluate these resource issues and select their Preferred Alternative for managing federal lands in the Klamath Falls Area. The BLM Preferred Alternative follows the BLM's intent of land use planning on a biodiversity basis that is a significant modification to the BLM's current land management practices.

We note that the RMP/EIS has eliminated the topic "Effects on Agriculture" as an issue in its planning document. The RMP/EIS sites that BLM activities in the planning area are not expected to have measurable affects on agriculture (livestock grazing excluded), and that the BLM owns relatively minor amounts of water rights in the Klamath Falls Resource Area. The Farm Bureau believes that these reasons are insufficient to exclude from the plan and analysis of the effects on agriculture. The BLM's lands throughout the Klamath Falls Resource Area are sufficiently dispersed that BLM's land management approaches for its lands will have significant affects on adjoining parcels and landowners. In addition, several of the proposed management approaches in the RMP/EIS are intended to improve water quality throughout the Klamath River Basin. Since agriculture is a predominant use of lands in the Klamath County area and a substantial contributor to the economy, the BLM's proposed modifications to land use planning will have substantial effects on agriculture in this area. These effects for all of the initial alternatives need detailed analysis for the EIS to be adequate.

L0617

The Klamath County Farm Bureau appreciates the opportunity to comment on the Draft RMP/EIS and strongly suggests that the BLM modify its schedule to include a detailed analysis and public review on the issues described above.

Sincerely,

Tracey Liskey

Tracey Liskey, President
Klamath County Farm Bureau

CITY OF KLAMATH FALLS, OREGON
AN EQUAL OPPORTUNITY EMPLOYER
P.O. Box 237
97601

SISTER CITY
ROTORUA, NEW ZEALAND

December 19, 1992

L-0693

Ms. Judy Nelson, District Manager
Lakeview District Bureau of Land Management
c/o Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, OR 97603

Subject: Klamath Falls Resource Area - Resource Management Plan and Environmental Impact Statement

Dear Ms. Nelson:

The City of Klamath Falls (City) has followed closely the efforts of the Bureau of Land Management (BLM) in its preparation of the Resource Management Plan and Environmental Impact Statement (RMP/EIS) for the Klamath Falls Resource Area. As was mentioned by the City's representatives at the various public meetings on the draft RMP/EIS, we were quite surprised when the very slow and deliberate process of taking comments on broad and non-specific plan alternatives quickly transitioned to the review of the BLM staff's Preferred Alternative which radically changes BLM land use within the region surrounding the City of Klamath Falls and Klamath County.

After literally six years of methodical general issue discussion at a level at which it was difficult for the layperson to address specific issues, the BLM has bypassed the step of securing public input to the selection of a Preferred Alternative. Instead you have presented the local governments and the affected public with a plan labeled as "draft," but clearly intended to be a final. The schedule for adoption of the final RMP/EIS now appears to be one that forces a sanguine public accustomed to the slow pace and very broad general review into a final review process in as short of time as can be politically justified. This is not public involvement. Instead, it could be criticized as public manipulation. The City is sure this was not the intent of the BLM.

The City does not believe it has had legitimate means to provide input to the selection of a Preferred Alternative. The City has prepared the enclosed detailed comments that raise significant issues on the draft RMP/EIS. If these comments are addressed by the BLM it would necessitate modification to the Preferred Alternative.

Our concerns about the RMP/EIS include:

- The BLM's adoption of rigid prohibitions on land use such as Wild and Scenic designation of the upper Klamath River, elimination of certain riparian areas from any grazing activity, and total exclusion of vehicular traffic from certain federal roads;

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PERSONNEL DIRECTOR
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CITY ATTORNEY
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MEMORIAL DRIVE
ANIMAL CONTROL
883-5379
AIRPORT
MUNICIPAL AIRPORT
883-5372

425 WALNUT STREET
POLICE DEPARTMENT
883-5336
143 BROAD STREET
FIRE DEPARTMENT
883-5351
CODE ENFORCEMENT
883-5358

226 SOUTH FIFTH STREET
PARKS, RECREATION AND CEMETERIES
883-5371
BUSINESS LICENSE
883-5360
PUBLIC WORKS
883-5363
PLANNING
883-5361

AREA CODE 503

L0693

- Use of a 300+ year planning horizon for timber harvest practices, but no consideration for the water and power resources needs in the region, even within the ten-year operating period of the Plan.
- The Plan's sharp restriction of resource use and development in the Klamath Falls Resource Area.
- Lack of consideration for water resource development and supply augmentation needs for protection or recovery of special status fish species in Upper Klamath Lake and the upper Klamath River;
- The Plan's misleading implication that recreation employment will be enhanced in numbers that would replace employment lost due to the Plan;
- The Plan's lack of recognition of likely future changes in the operation of the Klamath River below the J.C. Boyle powerhouse upon relicensing of the PacifiCorp project, particularly if the RMP/EIS precludes the Salt Caves Hydroelectric Project from development. And the failure to recognize potential elimination of recreational rafting associated with such relicensing of the Boyle project in the year 2006 (well within the 300 year planning horizon of the BLM's timber harvest objectives);
- Lack of recognition of the water quality, fishery habitat, and riparian habitat improvements provided by the Salt Caves Project, which the BLM proposes to exclude from development under the proposed Plan;
- Legal questions regarding the ability of the BLM to manage indefinitely the upper Klamath River as though it were Wild and Scenic under an RMP/EIS, particularly in light of the failed effort to obtain Congressional approval in 1991 after proposed legislation for such designation was passed out of the House Interior Committee;
- The lack of any demonstrated effort to offset the substantial local economic impacts anticipated from the implementation of the Plan;
- The absence of any consideration of the cumulative economic and employment effects of the six BLM RMP/EISs proposed in Western and South Central Oregon in the selection of the Preferred Alternative (listing economic effects in a separate document, and not taking any action in the Plan to mitigate such effects is meaningless); and
- Failure to allow the public to have any input to the selection of a Preferred Alternative, and failure to acknowledge the employment and economic impacts of the alternative until the BLM selected its own Preferred Alternative behind closed doors.

This is not an exclusive list of the City's concerns, which are discussed in more detail in the enclosed comments. Clearly, with issues as broad and as important as these, the RMP/EIS needs more work and more meaningful public input before a credible Preferred Alternative can be selected.

L0693

In comments by you and your staff in public meetings on the RMP/EIS, you have stated that only the interests of the nation as a whole are relevant in your planning for the Klamath Resource Area. It is unclear to us how a handful of BLM staff's personal preferences have been deemed to reflect the value balance of the nation, yet this is the apparent theory behind the RMP/EIS and an obvious bias in the Plan. The City believes such bias to be both inequitable and against the spirit, if not the very letter of the Federal Land Management Practices Act and the National Environmental Policy Act.

In light of the above concerns, the thrust of our comments is to modify your process now, before the draft is etched in stone, to allow the public meaningful input to craft an RMP/EIS that meets the broader needs of the region. Such a revised approach will be far more likely to avoid almost certain legal challenge, build local-federal government rapport, and meet the needs of the citizens for whom this basin is home, as well as the interests of the rest of the nation. Unlike past planning efforts such as the BLM's unsuccessful attempt to designate the upper Klamath River as Wild and Scenic, we are hopeful there will be a legitimate opportunity to work together to achieve a mutually acceptable RMP/EIS for the Klamath Falls Resource Area.

Sincerely,

James R Keller

James R. Keller
City Manager

Enclosures

cc: Dean Bibles
Mark Hatfield

L-0693

VOLUME 1

COMMENTS ON THE
THE BUREAU OF LAND MANAGEMENT
KLAMATH FALLS RESOURCE AREA
RESOURCE MANAGEMENT PLAN
AND ENVIRONMENTAL IMPACT STATEMENT

Prepared for

The Bureau of Land Management
Lakeview District

Prepared by

The City of Klamath Falls
500 Klamath Avenue
Klamath Falls, Oregon

December 21, 1992

L0693

CITY OF KLAMATH FALLS' COMMENTS ON THE THE BUREAU OF LAND MANAGEMENT KLAMATH FALLS RESOURCE AREA RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT

I. INTRODUCTION AND OVERVIEW OF COMMENTS

The City of Klamath Falls (City) has reviewed the Bureau of Land Management (BLM) Klamath Falls Resource Area Resource Management Plan and Environmental Impact Statement (RMP/EIS). The City's comments in the content of the RMP/EIS focus on two areas: the inadequacies of the BLM's RMP/EIS process and the selection of the Preferred Alternative; and failure to consider important information relative to resource issues in the Klamath River Canyon.

The City is concerned on the process used by the BLM in developing the RMP/EIS for the Klamath Falls Resource Area and that the BLM has followed a course of action that has limited public involvement during its selection of the Preferred Alternative. This approach has restricted the BLM's ability to analyze alternatives appropriately and reduced the public's ability to make meaningful comment on the BLM's proposed plan. Without the public's in-depth understanding and comments on the BLM's approach, meaningful changes to a plan that will govern the use of public lands in Klamath County area over the next ten years is severely reduced. Ultimately the City recommends that the BLM work to improve its public involvement process by adding a step to its public review process that allows for comments on the five alternatives originally elected for analysis before the Preferred Alternative is selected. While this approach would add time to the BLM's process, it would ultimately allow for meaningful public involvement in the selection of the Preferred Alternative, that is currently lacking from the resource management planning activity. Such a change can also reduce the almost certain legal challenges that would ensue without such change to the process, thereby accelerating the process in the long run.

The City of Klamath Falls also strongly suggests that the BLM not adopt a position which precludes the development of the Salt Caves Hydroelectric Project in its final RMP/EIS alternative until an actual right-of-way application is completed and submitted for the use of BLM lands. Currently, the BLM has no basis upon which to review and process a right-of-way permit for the Project and its land in the Klamath Canyon. To make a decision with respect to right-of-way for the Salt Caves Project in absence of an actual application seriously undermines the BLM's planning and invalidate the EIS.

Finally, the City has reviewed the BLM's five other RMP/EISs for the Salem, Eugene, Roseburg, and Medford BLM Districts for overall consistency in federal land use planning throughout Western and Southern Oregon. While the City finds that overall these plans are consistent in their approach, the City is extremely disappointed in the proposed changes and ultimate intent of BLM's planning efforts. These six plans seek to establish and set the direction for federal land use on over 250 million acres for the next ten years. The City finds that the plans are too restrictive in their intended use of major land resources and seek to establish patterns that are wholly inappropriate with the long-standing custom and culture of responsible use and joint stewardship of federal lands. Historically, this use and stewardship has produced thousand of jobs and allowed for an important resource-based economy throughout Western Oregon. While the City understands that some modifications to resource use is necessary, the approach taken in the six RMP/EISs is not based on continued reasonable use of federal lands but on a policy of severe restriction without regard and consideration for the extensive damage to local economies. The City suggests the BLM reconsider its approaches currently proposed for land use planning in Western Oregon and seek to re-establish approaches that are consistent with local land use needs, local economies, and the previous good stewardship principles.

II. COMMENTS ON THE RMP/EIS AND SELECTION OF PREFERRED ALTERNATIVE

A. Lack of Public Involvement

The City of Klamath Falls is concerned that the BLM has followed a process of selecting preferred alternatives without adequate public review and comments on the initial five alternatives developed by the BLM during their scoping process. The City understands that developing the RMP/EIS has been a long process for the BLM. Originally initiated in September 1986 with the mailing of scoping documents, the process has evolved and undergone modification as it proceeded. For example, during the process the state BLM offices developed guidelines for the selection of the various alternatives to be analyzed. In addition, the RMP/EIS study approach was modified from a timber-based analysis to a bio-diversity analysis. Nonetheless, the length of the process and change in direction for the study are not reasonable excuses for limiting public involvement in reviewing the alternatives.

The City is not aware of a public review process prior to the selection of the Preferred Alternative. This is a serious omission and an element missing in the lengthy process followed by the BLM and the attempt to allow adequate public review. Currently, the Preferred Alternative has been selected based on the personal preferences of the BLM staff and management. Because of the magnitude of federal lands involved throughout Western and Southern Oregon, the affected public, particularly in critical local areas, should have had the opportunity to review and comment on Alternatives A-E prior to the selection of the BLM's Preferred Alternative. In fact, the very point in the process where the public is best able to meaningfully review the BLM's planning is to aid in the selection of the Preferred Alternative based on their review of the BLM's prior alternative analysis.

If the BLM persists in its current approach, the public is facing a Preferred Alternative in which they had no input, and they are also faced with the review of six individual draft RMP/EISs for five BLM Districts and the Klamath Falls Resource Area at the same time. Moreover, the public is being asked to comment not only on five alternatives evaluated by the BLM but the BLM's own Preferred Alternative. This is particularly confusing since the Preferred Alternative is not explicitly selected from one of five alternatives previously reviewed by the public or necessary from components of those five alternatives, but is an alternative that is unique in and of itself. The fact that the BLM developed the Preferred Alternative prototype based on guidelines that evolved over time and that the BLM's policy of timber-based management switched to a bio-diversity management system in the middle of this process further indicate that public review of the changing policy directions should have been required on the alternatives being analyzed prior to the Draft EIS. It is the City's understanding that agencies like the Forest Service and the Corps of Engineers in their major EISs conduct detailed public involvement and review of alternatives being analyzed throughout their development process. This approach by the BLM has lead to confusion on our part on whether we should focus on the Preferred Alternative or comments on all other alternatives and their impacts in order to assist the BLM in correctly evaluating those alternatives to create a better Preferred Alternative. We believe the general public is also faced with this quandary and the result will be a substantially less adequate and useful comments to the BLM. It appears that following six years of BLM activities, that the decision has been made and that the major federal decisions and policy changes affecting millions of acres in Western and Southern Oregon are already complete. Public input at this point appears to be a facade.

B. Flaws in Selecting the Preferred Alternative

Beyond the issue of public involvement, we also feel that BLM's selected Preferred Alternative is particularly unresponsive to local needs and land use issues. It appears that this is the case primarily because the Preferred Alternatives have been developed and selected primarily at the BLM's state level. Developing and selecting preferred alternatives at the state level is in keeping with the BLM's approach of preparing guidelines and the prototype Preferred Alternative in-house as part of the process prior to the release of the Draft RMP/EIS. There are several areas throughout the RMP/EIS's where the lack of responsiveness to local needs is particularly apparent. First, the Draft RMP/EIS makes no apparent attempt to conform or establish consistency with the recently-prepared Klamath County Interim Planned Management Plan. Not only does the RMP/EIS Appendix 4-H fail to address the County's Interim Plan, it also fails to address the County's Comprehensive Plan. Discussion of the statewide goals is not the same as a discussion of Klamath County's Plan and its specific goals and guidelines. The RMP/EIS fails to demonstrate compliance with the requirement to be consistent with locally adopted resource-related plans.

The Klamath County Land Management Plan and its principle objectives are based on the precept of protecting the custom and culture of Klamath County citizens. The County has established goals and objectives for land deposition; water resources; agricultural resources; forest and forest products; cultural; recreation; wildlife, fisheries, and wilderness resources that are designed to guide the use of public lands and public resources in Klamath County. In large measure, the RMP/EIS fails to meet this test and the specific consistency with the resource values of the Klamath County's Interim Land Management Plan.

The City also finds that the RMP/EIS is not consistent with the intended approach and long standing land use management practices of the Klamath River Compact. The City believes consistency with the Klamath River Compact is particularly important in light of the BLM's selection of the Klamath Canyon as a special area within the structure of the Klamath Falls Resource Area RMP. In response to the BLM's Draft Wild and Scenic River Study, the City commented extensively on relationship of the Klamath Compact to planning and uses in the Klamath River Canyon. Those comments are attached as Exhibit A to these comments. This information establishes the priority of use for the Klamath River and explains the compromises made by Oregon and California in establishing the Klamath River Compact. The BLM is attempting to ignore and circumvent these established uses through the RMP/EIS. The BLM has in large measure ignored the relationship of the Klamath River Compact to the BLM's land use planning in the Klamath Canyon. This is a significant omission in the Draft EIS and the failure to address the issue of consistency with the Klamath River Compact places the EIS in jeopardy.

The City also disagrees with the BLM's approach toward managing the Klamath River as a Wild and Scenic River without appropriate Congressional action. It appears that the BLM plans to manage the Klamath River Canyon as if it is a Wild and Scenic River while holding out its fervorent hope that Congress will act at some time in the future to complete that designation. The City finds this to be a wholly inappropriate resource management approach. The BLM apparently fails to recognize that on two occasions Congress has taken up the issue of Wild and Scenic designation for the Klamath County and in both cases failed to act decisively to lock up the Klamath river or stop development of the Salt Caves Project. Apparently two considerations by Congress are not clear enough direction to the BLM that Congress does not seek restrictive resource use in the Klamath River Canyon. It is not clear to the City what action Congress must take to make its intent clear, since the BLM intends to wait for ever for a Congressional designation and to manage the river as Wild and Scenic while it waits. The City strongly recommends that the BLM modify its final plan by eliminating its approach toward Wild and Scenic resource management for the Klamath River that is unlikely to be designated by Congress and eliminating the reference to waiting for future Congressional designation for the Klamath River below J.C. Boyle dam.

The draft Klamath Falls Resource Area RMP/EIS completely fails to discuss BLM's reasons for selecting the Preferred Alternative. This is a plain violation of the National Environmental Policy Act and the Council on Environmental Quality Regulations. Obviously, selection of a Preferred Alternative is the entire purpose of the EIS process. It is, therefore, shocking that BLM after six years of analysis and hundreds of pages in the Draft EIS, fails to include any meaningful discussion which would reveal to the public BLM's reasons for preferring the Preferred Alternative. Unless these reasons are disclosed, in a detailed, specific, point-by-point discussion, the EIS will be legally invalid. In addition, the failure to include such a discussion in the Draft EIS so taints the Draft that it would not be proper at this point for the BLM to proceed with a final EIS. The public needs to know BLM's reason for selecting the Preferred Alternative before it can meaningfully comment on the Draft. The BLM should reissue a new Draft containing the required discussion.

The BLM staff is able to document the process that was followed from the initial scoping sessions through preparation of guidelines to select alternatives, and ultimately the publication of the Draft RMP/EIS with the Preferred Alternative. The RMP/EIS itself devotes a fair amount of time to describing the alternatives, including the Preferred Alternative, and evaluating the environmental consequences of the alternatives. What is lacking from the EIS is a sufficient discussion of the reasons, criteria, and analysis that went into selecting the Preferred Alternative. A detailed review of the EIS indicates that the Preferred Alternative is unique unto itself and contains elements resembling parts of the previously selected alternatives. However, the Preferred Alternative does not contain the exact elements of those previous alternatives. This leaves the reviewer in a quandary as to why and how the Preferred Alternative was selected. The City considers this a serious failing of the Draft EIS because it inhibits the reader's understanding of the BLM's Resource Management Plan. This understanding is particularly critical when the proposed Preferred Alternatives throughout Western and Southern Oregon seek to drastically modify the BLM's approach toward resource management and severely restrict the use of federal lands. This omission is serious enough to invalidate the entire Draft EIS and the City believes the Draft should be rewritten with an explanatory section and a new Draft EIS issued.

C. Omissions to the BLM's Planning Effort

The RMP/EIS fails to adequately address at least three major planning issues:

1. Wood River Ranch - The BLM recently assumed jurisdictional authority over the Wood River Ranch property. The addition of these 3,000 acres to the planning area will have a substantial impact on the BLM's management activities for years to come. The public's expectations for restoration of the marshlands are great and the potential benefit of a restored marsh ecosystem in terms of wildlife habitat, recreation and improved lake water quality will dictate that BLM allocate resources to the project. The magnitude of the Wood River Management plan mandates incorporation into the overall RMP as an integrated part. It is simply not acceptable to attempt to tag a planning effort of this scope onto the RFP as an after thought.

2. Fire Salvage Plans - The Lone Pine Fire and the major Forest Service planning response which resulted (over 150 assigned personnel) illustrates the need for comprehensive advance planning to deal with the forest fires which will occur. Fire suppression and prescribed fire programs are addressed as management directions common to all alternatives. However, aside from a brief discussion of emergency rehabilitation, there appears to be no discussion relative to expedited timber salvage operations. If the timber is allowed to go to waste through lack of adequate pre-planning, we all lose. Timely salvage sales not only promote local economic stability, but they provide the funds necessary for rehabilitation of the land.

3. Townsend's Big Eared Bat - Finally, the RMP/EIS Preferred Alternative fails to adequately address protection of the only known location of the Townsend's Big Eared Bat colony in the resource area.

   The bat is a federal candidate (Category 2) and a State sensitive species. The maternity colony is located in the caves in the upper Klamath River Canyon. As noted by the BLM in its January 9, 1991 survey of existing conditions with respect to animal population:

   > "Habitats that are free of human disturbances are apparently required by this species. Human disturbance of roosting and hibernation sites will likely result in abandonment of these sites. White water rafters on the Upper Klamath River visit the maternity colony sit and may eventually cause abandonment of this site..." (page 34).

   The Preferred Alternative in general calls for the protection of habitats of species such as the bat (page 2-66). Unfortunately, the Preferred Alternative provides no specific protection for the bat and it proposes management conditions which will continue to endanger the colony. For example, the Preferred Alternative calls for improving human access into the canyon (page 2-68 and 4-95). Further, BLM advocates Federal Scenic River designation for the canyon in spite of the fact that such designation would allow increased recreational use in the habitat (App. 2-74).

The Preferred Alternative cannot simply write off this colony. Short of fencing off the habitat, the area needs to be closed to all human access, especially during hibernation, roosting, and nursery periods. In conclusion, the BLM planning efforts need to be placed on hold while these matters are studies, reviewed by the public, and incorporated into the draft plan.

III. INCONSISTENT PLANNING HORIZON USED IN THE RMP ANALYSIS

The BLM has stated both in its plan and in comments in its public meetings that the RMP is focused on long term changes in resource use considering the environmental and resource needs over a 300+ year planning horizon. These statements have been made in particular with regard to the proposed timber harvest reductions and riparian habitat use prohibitions proposed in the plan. While these are lofty goals, they are inconsistent with the analyses used in the evaluation of water and energy resource needs. The BLM has ignored in its plan the changes that are likely to come about after the year 2006 when the Pacific Power & Light hydroelectric projects on the Upper Klamath River are relicensed. This known relicensing activity will begin by the year 2000, a short 8 years into the 300 year planning horizon claimed to be the basis of the BLM's RMP. Both the Oregon Department of Fish and Wildlife and the US Fish and Wildlife Service have, in comments to the Federal Energy Regulatory Commission and elsewhere indicated their desire and intent to require Pacific Power & Light to alter their peaking flows below J.C. Boyle as a condition of relicensing.

Ignoring this very important regulatory change (the relicensing) and the positions of the Oregon Department of Fish and Wildlife and the US Fish and Wildlife Service with respect to relicensing is a major planning analysis flaw in the plan. This proposed change in peaking flows is consistent with the flow changes that would be accomplished by the Salt Caves Hydroelectric Project. If, upon relicensing, the peaking operation is modified, there could be recreation impacts on rafting in the canyon. Such changes would likely be inconsistent with Wild and Scenic designation. There is no analysis of this inconsistency in the BLM's plan, making the plan inadequate and misleading. In addition, if upon relicensing there is reduced rafting in the river, the recreation estimates in the BLM's plans overstate what is likely to occur. The RMP therefore overstates recreation days per year under the preferred alternative.

In addition to the lack of consideration of relicensing, the plan ignores the increasing importance of the availability of renewable, non-polluting power resources which can be developed without fishery impacts, without new impoundments, and without

significant impact to scenic values, wildlife habitat, or aquatic resources. The Pacific Northwest region, as acknowledged by the Bonneville Power Administration and the Northwest Power Planning Council has need for new power resources now, and will have increased need over time. The BLM's plan proposes to deny development of the Salt Caves Project. Such denial, if successful, would create the need for 96,000 kilowatts of power and over 400 million kilowatthours of energy to be produced from other sources. At present, the region is planning gas fired power resources to meet incremental needs. Precluding the Salt Caves Project is therefore likely to result in increased reliance on Canadian natural gas, and increased air emissions, none of which has been acknowledged in the BLM's Draft EIS.

IV. COMMENTS ON RESOURCE ISSUES RELATED TO THE KLAMATH RIVER CANYON

The BLM's RMP/EIS planning process was initiated in 1986 and has proceeded through a substantial number of activities designed to culminate in a final EIS and plan implementing the BLM's resource management activities throughout the Klamath Falls Resource Area. While the Klamath Falls RMP/EIS has proceeded along the same basic path as the management plans for five other BLM Districts, it is unique in that specific resource issues for livestock grazing and the Salt Caves Project were added to the Klamath Falls Resource Area RMP/EIS.

The City is concerned that while the BLM determined to focus special attention on the Salt Caves Project and its relationship to the Klamath River Canyon, the analysis and information used is dated and incomplete. The BLM relied heavily on two documents: 1) its own Wild and Scenic River study for the Klamath Canyon; and 2) the Federal Energy Regulatory Commission's (FERC) EIS for the Salt Caves Project. While those documents may form a baseline of information with respect to the Klamath Canyon, there is substantial additional technical resource information that has not been included in the BLM's analysis. For example, there is available a substantial body of riparian habitat and fisheries data from the Department of Environmental Quality (DEQ) 401 permit process for the Salt Caves Project. This information and that developed in conjunction with the FERC's 10(j) process for the Salt Caves Project quantifies and establishes the benefits of the Salt Caves Project in relationship to the Klamath Canyon for the Klamath Falls Resource Area RMP/EIS.

There has also been a final ruling by the Oregon Environmental Quality Commission (EQC) finding that the Salt Caves Project will have no adverse impact on water quality nor the fishery in the Klamath River.

A. Water Quality

The RMP/EIS describes the water quality of the upper Klamath River as poor due to high temperature; low dissolved oxygen; high turbidity; high pH; and high levels of algae, bacteria, and suspended sediment. The following table taken from the RMP/EIS (Table 3-8) identifies the severity, impacted uses, and probable causes. This description of the poor existing environment is based primarily on BLM's review of the FERC Final EIS and DEQ information from 1988, and the BLM Final Eligibility and Suitability Report for the upper Klamath River Wild and Scenic Study in 1990. The RMP/EIS states that poor water quality result from both natural and man-made conditions. Causes range from poor quality of irrigation return water, high summer temperatures due to natural warming of the Upper Klamath Lake, reservoirs created by existing hydro projects and irrigation returns, the increased temperature and the associated nutrient enrichment from livestock returns, and grazing contribute to the poor water quality. The BLM points out that heat and sediment inputs to the upper Klamath River from agricultural, sewage, and industrial sources are minor compared to the naturally occurring heat and algae that enter the river from Upper Klamath Lake.

STREAM SEGMENT NAME	POLLUTION TYPE	SEVERITY (INFO SOURCE)	LIST OF IMPACTED BENEFICIAL USES	LIST OF PROBABLE CAUSES
Klamath River	Nutrients	Severe Problem (observation)	- irrigation - cold water fisheries - water-contract recreation - aesthetics - navigation	- surface erosion - water withdrawal - traffic - reservoir storage and releases - altered physical characteristics of stream - bank filling - dredging/aggregate removal - channelization/wetland drainage - irrigation return flows
	Pesticides	Severe Problem (data)		
	Sedimentation	Moderate Problem (data)		
	Insufficient Stream Structure	Severe Problem (observation)		
	Excessive Plant Growths	Severe Problem (data)		

Given the BLM's interest in enhancing water quality throughout the Klamath Falls Resource Area and the Klamath River Canyon, the BLM should encourage action like Salt Caves Project that improve water quality. However, in analyzing the RMP/EIS's alternatives, including the Preferred Alternative, the BLM fails to incorporate the latest available information and properly account for water quality benefits associated with the Salt Caves Project.

The Salt Caves Project has undergone two extensive water quality reviews. The first completed for the Project's Low Dam Alternative was granted a 401 permit. Subsequently, the City revised the Project to the No-Dam Alternative and based on DEQ's determination that this was a new project, refiled its 401 application in June 1990. Following that submittal, the DEQ conducted an analysis based on its water quality standards for the Klamath Basin. The DEQ analysis resulted in a determination that the Project met most but not all of the water quality standards. Exhibit B is DEQ's Evaluation Report and Findings on the 401 Application for the No-Dam Alternative. Subsequently, the FERC reviewed the DEQ report and provided its comments as part of the licensing process. These comments are included as Exhibit C. DEQ originally ruled that the Project did not meet the algal, winter temperature, and anti-degradation standard. However, in the City's appeal through contested case proceedings the DEQ withdrew the algal complaint based on lack of substance. The Judge found that the Project would not harm the trout fishery, but nonetheless sustained the denial on a winter temperature technicality even though testimony showed winter temperature increases would benefit the wild Klamath River trout. Judge Schwab's ruling is included as Exhibit D. The City protested the recommended order and proposed that the EQC issue the 401 certificate in light of the finding that there is no deleterious affect on water quality or the trout fishery. The EQC found there was no evidence of adverse environmental impact effects of the Salt Caves Project on the trout fishery or other aquatic organisms in the Klamath River. Despite the overall benefits to the fishery, the EQC sustained the technical violation and denied the 401 permit. The EQC ruling on the 401 application is attached as Exhibit E. This issue is currently under appeal in the State Court of Appeals. The City expects to prevail in this appeal.

Despite the technical violation of temperature standard, the BLM should review and incorporate into its analysis on the Klamath Canyon the sustainable water quality benefits due to the Salt Caves Project. The attached materials including the Evaluation Report and Findings by the Department of Environmental Quality, the Order by the Hearing Officer, the EQC's findings, and the Comments of the FERC on the DEQ Evaluation Report and Findings all substantiate the benefits to the Klamath River fishery and the improvements to water quality by the proposed Salt Caves Project.

The BLM indicates that the implementation of reduced timber harvest levels in the alternatives analyzed would benefit watershed, water quality, and riparian conditions. The information associated with the City of Klamath Falls' 401 application process for the Salt Caves Project and the resulting conclusions by the Administrative Judge in the contested case and the Environmental Quality Commission (EQC) show that the development of the No-Dam Alternative of the Salt Caves Project would significantly improve water quality parameters for the Klamath River regardless of the timber harvest selected. The RMP and the supporting EIS are incomplete and misleading without the inclusion of this information. Further, any alternative selected by the BLM for inclusion in the RMP/EIS which precludes the Salt Caves Project should be acknowledged as one which would preclude the water quality benefits that will be achieved by the Project.

B. Riparian Habitat

Similar to its water quality assessment, the BLM discusses the environmental effects on riparian zones for the Klamath Falls Resource Area. The BLM's focuses on disturbances to riparian zone from timber harvests, silva cultural treatment, road construction, grazing, mineral exploration, and recreation. The BLM fails to identify the private riparian benefits to the upper Klamath River associated with the Salt Caves Project.

The Klamath River below J.C. Boyle Dam is marked by a poor riparian zone due to the high daily peaking flows of the J.C. Boyle powerhouse. The riparian habitat is currently devoid of vegetation and marked during the warm summer months by desiccated algae all along both river banks. The construction of the proposed No-Dam Alternative of the Salt Caves Project would benefit the Klamath River below the J.C. Boyle powerhouse by stabilizing river flows (with the exception of rafting release days). These stabilized flows would allow the development of the riparian habitat enabling it to return to a more natural riverine environment.

The BLM has identified the Klamath River Canyon as a special interest area in the Klamath Falls Resource Area study. In keeping with that approach, the BLM should seek to encourage the stabilization of flows and the development of a more natural river environment that is in keeping with the construction of the Salt Caves Project. The City of Klamath Falls fisheries consultants have commented at length on this benefit to the Klamath River. Those comments by Stan Gregory (Exhibit F) and Charles Coutant (Exhibit G) are included in the City's submittal. By failing to include this assessment, the BLM has ignored the substantially identified benefits to riparian habitat and improvements to the Klamath River that would be created with the development of the Salt Caves Project.

C. Fisheries

The Draft RMP/EIS discusses the effects of alternatives on fisheries in the Klamath Falls Resource Area. This section focuses primarily on Red Band Trout and wild Rainbow Trout, and this section deals primarily with resource management activities that can affect fish habitat and production. The section cites several activities including: vegetation removal near streams affecting water temperature, sedimentation from land use activities, higher and more frequent peak flows as issues affecting the quality of fisheries habitat for Rainbow and Red Band Trout. The BLM's assessment focuses primarily on the loss of potential sources of woody debris and the resulting long-term effect on the water temperature, sedimentation, and stream flow issues throughout the Klamath Falls Resource Area. The Draft RMP/EIS states that the No-Action Alternative and Alternatives A and B with their higher timber harvest and resource use values severely reduce the amount of large woody debris entering stream channels where Alternatives C, D, E, and the Preferred Alternative will allow more woody debris to enter those channels as more and more acreage is reserved from timber production. This section notes almost in passing that the proposed Salt Caves Project could potentially affect trout populations and the reader is referred to the FERC Final EIS in 1990 for a more substantial discussion of the effects on trout populations and habitat in the Klamath River. The City feels the BLM is remiss in not including a more substantial evaluation of the positive benefits that the Salt Caves Project has on the water temperature, sedimentation, and streamflow conditions in the upper Klamath River.

Specifically, the construction of the No-Dam Alternative to the Salt Caves Project would substantially benefit the fishery habitat by reducing the current peak flow conditions that are identified as reducing the quality of fish habitat in the Draft EIS. The stabilized flows resulting from the Salt Caves No-Dam Alternative accomplish a number of stream flow benefits being sought by the BLM. See Exhibits F and G for comments by Stan Gregory and Charles Coutant. Stabilized flows reduce the scouring of fish eggs from gravel and transport juvenile fish downstream to less favorable habitats. Water temperature throughout the Salt Caves reach will be improved through the critical summer periods when temperature currently rises beyond the acceptable tolerance levels for salmonids. Sedimentation to the upper Klamath River will be reduced due to the implementation of a rigorous and highly technical sedimentation plan, and overall the upper Klamath River will undergo a substantial improvement to the overall river environment and fishery habitat. The Draft RMP/EIS identifies improvements to riparian habitat and recruitment of course woody material to the stream habitat would significantly improve and benefit the trout species. It is precisely the development of the Salt Caves Project that will offer the opportunity to vastly improve both the instream and riparian habitat conditions in the upper Klamath River. Stabilization of flows will reduce the scouring of grasses and woody material along the stream banks, thus providing for increased streambank vegetation and cover that will further reduce stream temperatures and provide the substance for the intrusion of woody materials needed for the trout populations.

The City believes that the Draft RMP/EIS should incorporate this analysis into the effects on fish section and not merely refer the reader to the FERC's Final EIS for this discussion. The benefits to the upper Klamath River for the trout population are so substantial and directly related to the temperature, sedimentation, and streamflow issues identified in the EIS that the failure to include this analysis substantially limits the RMP/EIS's credibility by clearly misleading the reader in an area where the significant benefits were being sought by the BLM can be provided by another mechanism, specifically the Salt Caves Project. The FERC has completed its required 10(j) consultation process with the Fish and Wildlife agencies. Exhibit H is a compilation of the agencies' comments and FERC response in that process.

D. Wild and Scenic River Status

The City is extremely disappointed in the BLM's continued approach to pursue Wild and Scenic River status for the Klamath River. The City has commented at length on the BLM's previous analysis on the suitability and eligibility of the Klamath River for Wild and Scenic status. That report contained a number of serious omissions making it an incomplete document. It is apparent that the BLM has not improved on its previous analysis. Since the Draft RMP/EIS does not contain additional information yet still pursues Congressional Wild and Scenic status for the Klamath River, the City is compelled to submit its previous comments (see Exhibit A) on the BLM's "Eligibility and Suitability Study for the Upper Klamath Wild and Scenic River." As you recall, that study was severely lacking in several areas including: 1) failure to address how Wild and Scenic designation could impact other land and water uses in the Klamath

Basin; 2) a comparison of natural resources in the Canyon to other fishing and river rafting opportunities in the region; 3) a failure to consider the impacts of Wild and Scenic designation on agriculture, timber, industrial, water use, future municipal water supply, and water quality of the upper Klamath River and Upper Klamath Lake; and 4) conflicts with the Klamath River Basin Compact Commission policies.

These issues are not been addressed in any additional detail in the Draft RMP/EIS and in this case, severely limit the adequacy of the EIS. For example, the Draft RMP/EIS fails to address the socio-economic impacts of the Wild and Scenic designation even though a major component of the BLM's plan is said to be recreation derived economics. Apparently, the BLM cannot describe any economic benefits to the designation of the Klamath River as suitable for Wild and Scenic status. In addition, the description of alternatives in the Draft RMP/EIS does not analyze the cost of managing the Klamath River as a Scenic River and fails to incorporate the additional cost of the management schemes it proposes.

In an even more fundamental omission, the Draft RMP/EIS fails to assess the impacts of Wild and Scenic designation on the critical areas of the Klamath River above the proposed designated reach. The effect of Wild and Scenic designation would be to lock in perpetuity the flow regimes and operating characteristics existing in the Klamath River flows below the J.C. Boyle powerhouse. This is not a free flowing stream by nature but exist only at the operational whim of Pacific Power & Light. Even though these flows have been shown to be highly detrimental to the existing fishery and riparian habitat, the flows would be perpetuated under the Wild and Scenic designation.

The Wild and Scenic designation would lock in perpetuity the operation of the J.C. Boyle project even though that project will be subject to FERC relicensing in 2006. Once established, the Wild and Scenic status will freeze the current environmental stresses and damages existing on the Klamath River. In addition, since the Klamath River above the J.C. Boyle dam is a highly regulated system, the establishing of Wild and Scenic River flows will fix much of the flow regime, drawdown, and lake regulation structure for Upper Klamath Lake. The overall effect will be to prevent the BLM, Bureau of Reclamation, or any other water resource management agency from modifying flow regimes needed to mitigate the environmental stresses in Upper Klamath Lake affecting the Short Nose and Lost River Suckers.

These consequences are monumental water resource management issues and the failure to adequately address and analyze their impacts are a severe shortcoming of the EIS. It is clear that in this situation alone the inadequacy of the EIS calls for revised and resubmitted draft addressing these issues.

The City also finds the discussion of Impact on Alternatives under the Wild and Scenic Rivers section to be confusing. The summary Table 4-36 on page 4-90 contradicts the text that follows the table. The table says that Alternatives A and B will negatively affect wildlife. However, the text says that although there will be an effect to wildlife, the effect will not reduce wildlife values to less than outstanding. The table also says that Alternatives A and B will be negative to prehistoric values. But the text says that prehistoric values will remain outstandingly remarkable. Furthermore, the table says the Native American traditional use value will be reduced. The text also says that such Native American use will be reduced to less than outstandingly remarkable. However, the text completely fails to cite any information justifying these conclusions. And the FERC EIS states that Native American traditional use of the canyon will be unaffected by the Project.

Thus, Table 4-36 makes it seem as if there are far greater negative impacts of the Project than there really are or that had been identified in the FERC EIS. If BLM is going to rely on the FERC EIS for a site-specific analysis of Project impacts, the reliance should be honestly reflected in the Draft EIS. The FERC Draft EIS concluded that there would be some scenic impact because of construction of the powerhouse and because of the cut and fill line that would be visible. The FERC EIS also stated that these negative impacts would be more than offset by improvement to the fisheries, by improvement to the flow and water quality regimen and by improvement to the socio-economic condition of Klamath County. The BLM's Draft RMP/EIS does not accurately reflect these FERC conclusions.

The RMP/EIS does not explained the basis under which it assumes the authorization to manage the Upper Klamath River as Wild and Scenic indefinitely pending Congressional action on the issue. In the 1990-91 Congress, BLM attempted, unsuccessfully to obtain such Congressional action on Wild and Scenic designation. After extensive bipartisan debate on the issue before the House Interior Committee, legislation on such designation was narrowly passed out of committee. The bill could not get attention on the floor and it died in Congress. To place the river under administrative management as Wild and Scenic until yet another bill goes through committee and receives a full vote of the House and Senate is simply a thinly veiled means of administrative delay and an abuse of administrative authority. The City would like to see a legal review of points and authorities explaining the basis of the BLM's belief that it has the ability to so manage this reach of the river, particularly given the facts surrounding this situation.

E. Economic Development

The City objects to the cavalier approach taken by the BLM in evaluating the negative socio-economic impacts of its Preferred Alternative. The RMP/EIS addresses the reduced economic benefits in the Klamath Falls Resource Area due to the changes in policy and management of federal land proposed in the RMP/EIS. According to the RMP/EIS, the reduced timber management programs are expected to support approximately 40 jobs during the life of the plan (ten years). This is approximately 130 jobs less than the average supported in the 1984-88 base period. We find it disconcerting that the BLM offers no serious mitigation plans for this substantial job loss and the resultant adverse consequences on community stability. In several locations, the BLM attempts to create the impression that its broader direction toward recreational activities are community development oriented, but in its analysis it does not identify any additional jobs supported through this recreational approach than were available in 1984 through 1988.

The BLM offers two apparent sources of mitigation for the decline in revenues associated with the loss of timber management and local jobs. First, is the BLM's apparent expectation of continuing the 1992 federal legislation that protected counties from large reductions in O&C revenues. Second, are the BLM's expectations that state and county taxes could be increased to provide revenue sources. The BLM proposes that "counties could obtain replacement revenues through a variety of taxation methods which would increase the tax burden on county residence and property owners" and "increase tax rates or alternative revenue sources could be used by the state to fund programs and possibly redistributing the tax burden." The BLM is apparently unaware of unwilling to address the tax limitations established in the State of Oregon through Ballot Measure 5. These approaches are patently insufficient, inadequate, and largely unimplementable as mitigation measures.

The BLM's RMP/EIS identifies improving recreation as a prime consideration in its resource management planning activities. It is apparent from the socio-economic review and analysis conducted that the BLM is considering recreation to be an attempt at replacing the lost income and jobs due to reductions in timber harvest and grazing

L0693

restrictions on BLM lands. The BLM's approaches to these efforts appear limited and are certainly insufficient in the City's view to in any way encounter the extensive loss of jobs and revenues precipitated by their restrictive planning activities on federal lands. Perhaps more importantly, the City views the RMP/EIS to be restrictive with respect to recreational development in an of itself. For example, in the Klamath Falls Resource Area there appears to be conscious intent to limit off-highway vehicle use on BLM lands. At the same time, there is an extremely limited number of specific campground and trail upgrades in the Klamath Falls area.

In the Executive Summary to all six Western Oregon Draft Resource Management Plans, the BLM states its pledge to aid and support Oregon economic development efforts to help small isolated communities develop and implement alternative economic strategies to substitute for their faltering timber-based economies. The BLM offers coordination and prioritization of BLM recreation and management development activities to benefit those economies. The City finds that these approach are too simplistic and largely unimplementable in light of the severe economic disarray imposed by the BLM in the restrictive land use plans being developed in the RMP/EIS process.

F. Valuable Economic Development Concepts Ignored

Above and beyond the BLM's inability to address the serious socio-economic consequences of its plans, the BLM also ignores the potential for economic development already identified within the Klamath Falls Resource Area. For example, the RMP/EIS apparently ignores the long-term benefits of additional revenue available to the City of Klamath Falls and the economic development targets of those revenues available from the completion of the Salt Caves Project. The City understands that these revenues have been ignored in the long-term because in the main they fall outside the ten-year planning horizon for the RMP. This approach is taken by the BLM, even though the BLM takes up to a 300-year look in assessing the benefits of reduced timber harvest on the overall forest ecosystem that it seeks to protect in its plan. The City believes it is inconsistent to attribute long-term benefits to the planning timber resources that will lead to the selection of its Preferred Alternative and at the same time ignore long-term economic benefits of the use of resources in the Klamath Canyon. The BLM analysis also ignores the short term benefits of construction jobs and revenues associated with the Salt Caves Project even within its ten-year RMP/EIS analysis. The City finds this patent disregard of the negative socio-economic effects of the Preferred Alternative while at the same time ignoring potential benefits of other programs specifically

L0693

designed to improve the economic development of the Klamath Falls Area to be misleading and flawed.

V. CONCLUSIONS AND RECOMMENDATIONS

Based on our review of the BLM's Draft Klamath Falls Resource Area RMP/EIS the City believes the BLM document should undergo substantial revision, additional public comment and review prior to its completion.

The City recommends that the BLM initiate an additional step in its planning process that begins with the preparation of a detailed economic analysis of the previously selected alternatives (No Action Alternatives A-E) and then include the opportunity for public review and comment of those revised alternatives prior to the selection of a Preferred Alternative. The comments on these alternatives should then be used to assist in the selection of a Preferred Alternative for the Klamath Falls Resource Area by the public.

While the City believes that the current BLM planning process is in need of substantial revision, the Draft RMP/EIS fails to discuss the BLM's reasons for selecting their Preferred Alternative. The current Draft RMP/EIS is inadequate and needs to include substantial explanation of the reasons and justification for selecting the Preferred Alternative prior to completing the EIS.

The Draft RMP/EIS fails to adequately address the major planning issues associated with: the Wood River Ranch, fire salvage plans, and protection of the Townsend Big Eared Bat and the City recommends their inclusion in the RMP/EIS.

The City recommends that the BLM establish a consistent planning horizon for the RMP/EIS. If the BLM uses a 300+ year planning horizon for timber resources it should apply the same planning horizon to other resource benefits and issues associated with the Plan.

The City recommends that a Draft RMP/EIS include additional and current information related to water quality, fisheries, and riparian habitat for the Klamath River that was developed in conjunction with the Salt Caves Project's 401 water quality application process and the FERC's 10(j) process.

L0693

The City recommends the BLM include an evaluation of the cumulative economic and employment effects of all six of its RMP/EIS proposed for Western and Southern Oregon prior to the selection of any Preferred Alternatives. The City strongly recommends that in any final Resource Management Plan that the BLM take no action to disapprove the Salt Caves Project without a right-of-way application.

The City questions and suggests the BLM modify its approach to attempt to manage the upper Klamath River as a Wild and Scenic River, particularly in light of the failed Congressional efforts to obtain such a designation.

The City recommends that the RMP/EIS contain an analysis of the effects of future operational changes of the Klamath River below the J.C. Boyle powerhouse to account for the future relicensing efforts of the J.C. Boyle project. This evaluation should be tied to the impacts associated with Wild and Scenic Rivers on threatened and endangered species in the Upper Klamath Basin.

These recommendations summarize the detailed comments provided on the BLM's Klamath Falls Resource Area RMP/EIS. They are not inclusive of all of the City's comments, conclusions, and recommendations on the BLM's document. However, in aggregate they point out the need for the BLM to undertake a substantial revision to the RMP/EIS and that that revised document should undergo detailed public involvement prior to the selection of the Preferred Alternative associated with the Plan. Only through this mechanism can an adequate Environmental Impact Statement and a legitimate Resource Management Plan be developed.

L-0787

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

DEC 18 1992

REPLY TO
ATTN OF: WD-126

Judy Ellen Nelson, District Manager
Lakeview District
1000 Ninth Street S.
P.O. Box 151
Lakeview, Oregon 97630

Dear Ms. Nelson:

The Environmental Protection Agency (EPA) has reviewed the draft **Klamath Falls Resource Area Resource Management Plan (RMP) and Environmental Impact Statement (EIS)**, Bureau of Land Management (BLM), Oregon. Our review was conducted in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, which directs EPA to review and comment on all federal draft and final EIS's. EPA provided scoping comments on the Proposed State Director Guidance on July 18, 1988, and on the draft Prototype Monitoring Plan on November 15, 1991.

The draft RMP/EIS presents seven alternatives that could direct BLM land management activities on the District's 212,000 acres of federal land and 21,000 acres of reserved mineral estate in the Klamath Falls Resource Area in the Lakeview District. The Preferred Alternative (PA) includes provisions for an annual sale quantity (ASQ) of 1.027 million cubic feet [5.79 million board feet (MMBF)] of timber, a 73 percent decrease from current ASQ. The PA also includes provisions for managing 95 grazing allotments that support 13,869 animal unit months. The final adopted RMP will replace and supersede the Jackson/Klamath and Lost River management framework plans.

It is clear that the development of this draft RMP/EIS required a significant level of effort by BLM staff. EPA commends BLM for addressing such a broad range of issues through a variety of management objectives for the many resources found on BLM-administered lands. EPA is pleased to see discussions regarding biodiversity and global climate change in the draft RMP/EIS. These are difficult issues to address and BLM should be commended for addressing them as a part of this planning process. EPA is also pleased to see an increased emphasis on protective land use allocations such as special management areas.

However, EPA has several concerns with other aspects of the proposed action. EPA is rating this draft EIS EO-2 (Environmental Objections-Insufficient Information). Our environmental objections are based on the lack of sufficient development of Best

Management Practices, a monitoring plan, and a cumulative watershed effects analysis process that provide adequate safeguards to assure that site-specific projects implementing the RMP will not adversely impact currently degraded watersheds. Our environmental objections are also based on the potential air quality, human health, and safety impacts from prescribed underburning. More specifically our environmental objections include the following:

- The high potential for further water quality impacts and beneficial use degradation in several streams and rivers that have serious nonpoint source pollution problems and/or are water quality limited;
- The lack of riparian zone protection for first and second order streams which may contribute to violations of water quality standards (WQS) and impacts to beneficial uses;
- The potential for adverse impacts to fisheries related to the prediction that 18 of the 27 analytical watersheds in the planning area will decrease in condition under the PA;
- The direct health and safety impacts of prescribed burning in rural interface areas and the indirect air quality impacts of the District firewood program;
- The use of an arbitrary ten year timeframe to distinguish between short-term and long-term resource impacts which could result in inaccurate impact assessments for biological populations with implications for adverse population or community-level effects;
- The potential for impacts to threatened species listed under the Endangered Species Act, including the northern spotted owl; and
- The lack of RMP direction regarding future environmental analysis for site-specific project proposals.

The following additional information and clarification is requested:

- Preparation of sufficiently-developed management guidance to facilitate water quality analysis and to ensure that the existing water quality limited streams and rivers and other waters do not sustain violations of water quality standards and do not experience additional degradation of beneficial uses;
- Establishment of riparian zone protection for first and second order streams;

- Clarification of the need for and criteria for use of prescribed burning in rural interface areas and an expanded discussion of mitigation measures related to the District firewood program.
- Documentation of consultation activities under Section 7 of the Endangered Species Act; and
- Clarification and direction for future project environmental analyses to be tiered to the RMP.

We appreciate the opportunity to review and provide comments on this draft RMP/EIS. An explanation of the EPA rating system for draft EISs is enclosed for your reference. This rating and a summary of these comments will be published in the Federal Register. If you have any questions about our review comments please contact Sally Brough in our Environmental Review Section at (206) 553-4012.

Sincerely,

Charles E. Findley
Director, Water Division

Enclosures: Draft EIS Rating System
Review Comments
Impact Definitions
Riparian Policy

cc: D. Dean Bibles, BLM State Director
Cathy Humphrey, RMP/EIS Team Leader

U.S. Environmental Protection Agency (EPA)
Review Comments

Klamath Falls Resource Area, Lakeview District, Bureau of Land Management (BLM)
Resource Management Plan (RMP)
and
Draft Environmental Impact Statement (EIS)
Oregon

December, 1992

INTRODUCTION

As noted in our transmittal letter we have several concerns about the proposed action. We have identified several issues in the draft RMP/EIS that need clarification, revision or an expanded discussion. We offer these comments in an effort to strengthen the RMP/EIS and provide the public with a clearer picture of the environmental consequences of the proposed action and the opportunities for future public involvement with site-specific projects. A detailed discussion of our concerns and recommendations for the final RMP/EIS is presented on the following pages.

WATER QUALITY

Water Quality Standards and Beneficial Uses

There are several streams that are listed as having a "severe" nonpoint source problem in the *1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution* (NPS Assessment Report) and/or are listed as being "water quality limited" or lack beneficial use support in the *Oregon's 1992 Water Quality Status Assessment Report* (305(b) Report) where timber harvest and road construction is proposed in the draft RMP/EIS. They are all located in the Klamath Basin

The most commonly cited causes of degradation in water quality and impairment of beneficial uses in the Klamath Basin are surface erosion and vegetation removal along streambanks, subsequently removing the thermal cover to streams. Other causes include irrigation return flows, changes in streamflow pattern and timing, and stream channel alterations. The land uses responsible for these problems are irrigated agriculture, irrigation return water, livestock grazing and forestry. Of particular concern to EPA are:

Middle Spencer Creek

The water quality condition is listed as moderate by observation in the NPS Assessment Report. The major pollution type in Middle Spencer Creek is sediment. Impaired beneficial uses are coldwater fisheries and recreation. Causes for the disturbances are bank and riparian vegetation disturbance and erosion. Land uses associated with disturbance is timber management, road construction, harvesting and recreation.

South Hayden Creek

This watershed had the highest watershed condition index (WCI) rating among the analytical watershed. The high rating is indicative of a high degree of disturbance. It is not a water quality limited stream and it is not in the NPS Assessment Report. Over 45 percent of this watershed is under BLM management. The draft RMP/EIS indicates that this watershed has had problems with erosion, bank sloughing, and donwcutting due to past livestock grazing.

Upper Klamath Basin

The Upper Klamath Basin, including Agency Lake, Upper Klamath Lake, Cherry Creek, Sevenmile Creek, Williamson and Sprague Rivers and the Upper Klamath River are listed as ranging from water quality limited, with severe water quality conditions (with data), to moderate water quality impairment. The water quality of both Upper Klamath Lake and Upper Klamath River are rated as severe (with data). The Klamath River begins at Upper Klamath Lake and drains a watershed of 8,003 square miles. The Upper Klamath River is identified as water quality limited with the following parameters; nutrients, dissolved oxygen, pH and algae.

The major pollution "types" in the Upper Klamath River are low dissolved oxygen, pesticides, toxics, solids, sediment, low flow, and excessive growth of aquatic plants (algae). The primary impaired beneficial uses are coldwater fish, warmwater fish, water recreation, aesthetics and power generation. Reasons for the exceedance of water quality standards are surface erosion, water withdrawal, reservoir storage and releases, altered physical characteristics of the stream, bankfilling, dredging, wetland drainage and channelization, and irrigation return water. The land use patterns in the Klamath Basin includes agriculture (irrigated), grazing, harvesting, road construction, timber management, recreation and storm flooding.

The Klamath Basin is not only a water quality limited stream, it is also one of EPA region 10's priority watersheds (Tier III). The problems in the watershed are compounded by the presence of endangered fish species (2 fish species in Upper Klamath Lake) as well as several point sources further down river, near the City of Klamath Falls.

BLM Activities in Water Quality Limited Watersheds

Timber harvest and road construction in these watersheds may be implemented without exceeding the water quality standards (WQS) or causing beneficial use impairment. However, the primary methods for preventing standards impairment are not developed sufficiently in the draft RMP/EIS.

The basis for our environmental objections is that timber harvest, road construction, and grazing may occur without an adequate cumulative watershed effects (CWE) analysis of site-specific projects and that timber harvest deferrals may not occur in already degraded watersheds in response to these analyses. EPA is also concerned that water quality monitoring plans are not sufficiently developed to verify that Best Management Practices (BMP) are effectively preventing adverse water quality impacts.

A CWE analysis process should be developed for inclusion in the final RMP/EIS (see following paragraphs). Since implementation of BMPs represents the major form of mitigation the final RMP/EIS needs to discuss how effective the BMPs have been in the past. Judicial reviews of the National Environmental Policy Act (NEPA) cases have supported not only the need for identifying mitigation measures, but for discussing mitigation measure effectiveness as well.

Federal Consistency, Clean Water Act, Section 319

The federal consistency provisions of Section 319 provide an opportunity for state and federal agencies to coordinate their activities and cooperate in achieving state water quality goals.

The draft RMP/EIS appropriately utilizes the NPS Assessment Report to identify existing water quality conditions on the Klamath Falls Resource Area and compare them to those estimated by the WCI, a BLM cumulative effects analysis. We support this use of the NPS Assessment Report. However, additional uses of the NPS Assessment Report should be developed for the final RMP/EIS. The NPS Assessment Report, in conjunction with the 305(b) Report and other data, should be used in the final RMP/EIS to establish:

1. Desired future condition on a stream-by-stream basis from which RMP accomplishments can be measured.
2. Criteria and priorities for cumulative effects analyses.
3. Priorities for water quality monitoring programs.
4. Criteria and priorities for watershed activity level plans.
5. Priorities for watershed rehabilitation programs.
6. Best management practices and thresholds and decision criteria for watershed harvest deferrals.

Watershed Cumulative Effects

RMP Implementation

The draft RMP/EIS discusses potential cumulative water quality impacts. However, EPA is concerned that the draft RMP/EIS does not specifically describe the nature of future CWE analysis to be conducted for site-specific projects during RMP implementation. Until the WCI is validated and peer reviewed, it cannot be used with confidence for site-specific projects. Road construction and timber harvest may need to be deferred and grazing patterns modified pending the outcome of cumulative watershed effects analyses for site-specific projects. Any CWE analysis used for site specific projects should be scrutinized to the same extent as the WCI and also be subject to the scientific process. To be meaningful, CWE analyses also need to be considered and watershed protection measures implemented by all major land owners in a watershed.

EPA is pleased to see a BMP directing that "The watershed would be deferred from management activities that would potentially degrade water quality. Deferment would occur for approximately five years, at which time the watershed would be reanalyzed." (Appendix 2-8). EPA supports this direction.

Additional Information

The final RMP/EIS should include the following:

1. A description of the CWE analysis that will be used for future site-specific projects during RMP implementation. The extent of analysis validation should also be described. If not, a schedule for completing such validation should be included.
2. A BMP outlining specific parameters applicable to project-specific CWE analysis, such as water quality monitoring results, equivalent clearcut area, road density, or beneficial use impairment identified in the NPS Assessment Report and the 305(b) Report.
3. A BMP outlining a more conservative site-specific project planning approach when CWE analysis tools are not available, are under development, or have not been validated. When adequate tools and monitoring data are not available to predict future water quality impacts, timber harvest, road construction activities should be reduced and grazing patterns modified to provide for an extra margin of safety and water quality protection.
4. A description of how CWE activities will be coordinated among adjacent landowners through such things as annual meetings to coordinate road construction and timber harvest plans and/or cooperative agreements

and land management objectives regarding desired future conditions for water quality, riparian zone protection, and activity deferrals.

Water Quality Monitoring Plan

Concerns

A monitoring plan with water quality elements was included in the draft RMP/EIS. A detailed water quality monitoring plan is critical for successful long-term implementation of BMPs and protection of water quality and beneficial uses. While BMPs are intended to protect water quality, they must be monitored to verify their effectiveness.

The monitoring plan should be complete and well organized with carefully chosen sampling parameters and sampling sites. Coordination with other local, state, and federal agencies is important to avoid duplication and to foster efficient use of limited resources. Sampling priorities should be consistent with problem areas identified in the NPS Assessment and 305(b) Reports and other data.

An important component of RMP implementation is the commitment to conduct monitoring. Increasing demands for resources can result in decreased monitoring efforts. EPA believes that timber sale volumes/grazing and associated programs should be reduced proportionately if annual funding is not sufficient to support monitoring. EPA would like to see criteria outlined in the final RMP/EIS that clarify how this commitment will be met during RMP implementation.

Additional Information

The final RMP/EIS monitoring plan should include written standards for sampling design, monitoring parameters, analytical techniques, statistical methods, reporting units, location of sampling, indicator species, budget, and procedures for using data or results in plan implementation; and availability of results to interested and affected groups. It should also have a clear feedback mechanism which enables the use of monitoring results to adjust standards and guidelines, BMPs, standard operating procedures, monitoring intensity, and project implementation (including timber sale administration) at first detection of adverse effects. Provision of such an adjustment process will ensure that BMPs and management strategies will improve in the future and that unforeseen adverse effects are identified and minimized. Lastly, the monitoring plan should include validation of the WCI and any other cumulative effects model or index intended for predicting the water quality effects of site-specific projects.

Helpful resources for the development of water quality and biological monitoring plans are:

Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska, EPA/910/9-91-001, May 1991.

Rapid Bioassessment Protocols For Use in Streams and Rivers, EPA/444/4-89-001, May 1989.

The monitoring plan may also be improved with the addition of:

- Identification of a measurable desired future condition (DFC) for each stream or subwatershed which adequately protects the beneficial uses. The DFC can be expressed in terms that best describe the beneficial use (e.g. percent fish habitat capability). DFCs are needed to ensure that future water quality accomplishments are measurable.
- On-site inspection to monitor BMP implementation by appropriate specialists as well as timber sale contract administration. Site review may be randomized (e.g., random number table).
- Riparian Management Area (RMA) monitoring to assess long-term large organic debris contribution to stream systems in such terms as quantity, size, species, and delivery rate.
- A fisheries monitoring protocol based on identification of sensitive populations and habitat types and prioritized/stratified by stressors and resource risks.
- A research/monitoring program to determine the effects of spatial and temporal segregation of harvests on sediment and hydrology.

In July 1991 Oregon adopted narrative biocriteria as part of its WQS. The state is in the process of developing the implementation guidance for the biocriteria and is selecting appropriate reference sites in various ecoregions in the state. Once this framework is in place, the BLM should coordinate its monitoring locations and protocols to allow comparison with the reference site conditions. This is necessary in order to determine whether the WQS for protection of biological integrity of the waters are being met. Provisions for this coordination should be spelled out in the EIS. In addition the state expects to adopt numeric biocriteria in 3-5 years. The BLM activities will be expected to meet these WQS once they are adopted.

Riparian Zone Protection

Concerns

Since the draft RMP/EIS provides inadequate protection for RMAs in first and second order (headwater intermittent and perennial) streams, WQS may not be met and beneficial uses may not be protected. The final RMP/EIS needs to include full protection of first and second order streams.

These first and second order streams are important in maintaining downstream system integrity and water quality as well as providing fisheries and amphibian habitat/refugia. Disturbed first and second order streams may become sediment sources to downstream areas. In addition, loss of woody vegetation along these headwater streams may eventually lead to reduced large organic debris in downstream reaches. EPA agrees with the Medford draft RMP/EIS statement that the greatest opportunity for improving stream conditions through RMA prescriptions is on first, second, and third order streams.

EPA has a number of concerns regarding first and second order streams. First, the largest percentage of riparian vegetation removal is along first and second order streams. Most of BLM's lands are along these headwater streams.

Second, RMA widths are too narrow and could be weakened through road and yarding corridor development and grazing. Under the PA, timber harvest could occur in riparian zones for road construction, yarding, or habitat improvement; however, the draft RMP/EIS does not outline under what conditions these activities could take place. The Roseburg draft RMP/EIS states that "RMAs of less than approximately 95 feet are considered inadequate for proper riparian function, and RMAs smaller than 150 feet are considered to be functioning less than optimally." (page 4-42).

Third, the draft RMP/EIS relegates first and second order streams to a lower level of protection than higher orders. This is inconsistent with the Oregon WQS and with EPA's regional Riparian Area Management Policy. A copy of this Policy is enclosed for your information.

Additional Information

In addition, the final RMP/EIS should clarify how the average widths shown for RMAs will be utilized in on-the-ground analysis. Specifically, the final RMP/EIS should identify how site-specific riparian resource management would be documented and consistently implemented. The draft document states in a number of places that riparian zone widths would be determined by on-the-ground characteristics. EPA recommends that the final RMP/EIS include both the documentation and the

mechanisms to fully protect all beneficial uses for riparian areas, including wetlands and first and second order headwater, intermittent, and perennial streams.

Watershed Condition Index

The WCI is a reasonable method for comparing watershed effects among the RMP/EIS alternatives, although future refinements could improve its effectiveness. It is one of the most complex approaches EPA has reviewed for evaluating watershed effects in a programmatic land management plan.

EPA's greatest concern is that the WCI should not be considered a substitute for evaluating cumulative effects on a project-by-project-basis during RMP implementation. In addition, it may be inappropriate to compare the index among different watersheds. The large spatial scale of the analytical watersheds used in applying the WCI could mask significant resource degradation.

Due to the way in which the WCI is applied, it is essential that it be validated. Until then it should only be very cautiously used as a resource in important project level decisions.

Additional Information

The WCI does not provide an adequate assessment of synergistic and/or cumulative effects for site-specific projects. It appears to be quite subjective and may produce variable results. The final RMP/EIS should provide greater explanation regarding WCI assumptions as well as selection of index constants. In addition, several index factors may distort actual resource impacts.

The major missing component is a way of characterizing uncertainty in the estimates. This requires a methodology for making and evaluating field measurements and assessing uncertainty. Standard methodologies for propagating uncertainty are Monte Carlo methods, Latin hypercube methods, and first-order uncertainty. Monte Carlo methods are becoming common in risk and uncertainty analyses; references abound in the environmental literature (e.g., Smith and Freeze, 1979). Latin hypercube methods are a subset of Monte Carlo methods (Iman and Shortencarier, 1984), and first-order uncertainty methods are described in Benjamin and Cornell (1970). These methods all require data with which to evaluate the uncertainty in independent variables (the components of each index).

References

Benjamin, J.R., and C.A. Cornell, *Probability Statistics and Decisions for Civil Engineers*, McGraw-Hill, New York, 1970.

Iman, R.L., and M. Shortencarier, *A Fortran 77 program and user's guide for the generation of latin hypercube and random samples for use with computer models*, Rep. NUREG/CR-3624, SAND83-2365, prepared for U.S. Nuclear Regulatory Commission by Sandia National Laboratory, Albuquerque, N.M., 1984.

Smith, L., and R.A. Freeze, *Stochastic analysis of steady state ground-water flow in a bounded domain, 2. Two-dimensional simulations*, Water Resources Research, 15(6), 1543-1559, 1979.

Best Management Practices

The achievement of WQSs for NPS activities occurs through the implementation of BMPs designed to achieve WQSs. WQSs are the means by which BMP effectiveness is measured. While BMPs are intended to protect water quality, they must be monitored to verify their effectiveness. If found ineffective, the BMPs must be revised. Therefore, the final RMP/EIS should not rely solely on the application of BMPs to satisfy the Clean Water Act. Since the use of BMPs does not guarantee compliance with WQS, the final RMP/EIS should discuss the effectiveness of BMPs with illustrations of specific project examples and/or monitoring results. For example, the final RMP/EIS could discuss the degree of risk of BMP failure as well as any history of BMP success as illustrated via effectiveness monitoring in similar project areas.

Fisheries

Concerns

We are concerned that fish production potential was tied in part to the installation of fish habitat improvement (e.g., instream structures) and hatchery stocking programs. Beschta et al. (1991) determined that the restoration of vegetation adapted to riparian environments and the natural succession of riparian plant communities is necessary to recreate sustainable salmonid habitat and should be the focal point for fish habitat improvement programs. They further state that because of frequent negative effects, structural alterations to stream channels should generally be eliminated as a fish improvement strategy. Studies have not shown a relationship between stream improvement projects and salmonid population. Therefore, fish production should not be related to capital investment in "stream improvement" projects. Hatchery fish may negatively affect native fishes through genetic modification, increased intra and inter-specific competition, and altered migration patterns and timing. Rather than provide short-term solutions to habitat degradation, landscape level planning should be undertaken to reduce further habitat degradation and implement district-wide restoration strategies (e.g., restoration of off-channel habitat).

Retention of riparian areas along third order and greater streams and the placement of instream structures will not lead to anticipated population increases. The fish habitat assessment assumes that riparian tree size and fish production are directly related. However, acute and chronic stressors such as upstream sediment inputs may continue to degrade fish habitat. Impacts such as sedimentation persist and accumulate in downstream, low-gradient habitats over periods of decades or even centuries.

Additional Information

The Klamath Falls Resource Area, Lakeview District is responsible for the maintenance of sensitive species habitat and the restoration and sustainable management of the resource. To address these issues, EPA supports development of coordinated activity management plans. The final RMP/EIS should provide greater detail regarding plan coordination and implementation mechanisms.

In addition, chronic system stressors, such as unstable slopes, landslides, roads, and mining activities that may further degrade systems prior to recovery are not addressed. For example, the draft RMP/EIS indicates that debris torrents and landslides have affected channel integrity. The final RMP/EIS should indicate whether these inputs are ongoing and whether further logging would occur in the same geomorphic setting. The final RMP/EIS must address both past and future management scenarios to adequately assess long-term enhancement of anadromous fish streams. It should provide greater information on specific mechanisms of habitat recovery and aquatic species augmentation.

The Fisheries Productivity Rating System needs further explanation. Detail should be provided regarding the related factors analysis, rating system assumptions, and level of baseline data collection. For example, temperature data should include time of collection, stream order, location, and maximum, minimum, and average temperatures. In addition, clarification should be provided regarding the statement "several streams were excluded (in the evaluation) because the current potential was low."

The draft RMP/EIS lists several fish species of concern including two endangered species and one candidate species. However, information and documentation (e.g., genetic integrity, diversity) regarding these species are absent. The final RMP/EIS should include:

(a) a comprehensive biological survey;
(b) identification of watersheds supporting productive or valuable remnant populations or communities of native fishes, amphibians, and other aquatic biota; and

(c) delineation of a well-distributed network of least disturbed watersheds for conservation of biotic diversity.

Adequate fisheries information is needed to realistically evaluate management alternatives. For example, depressed or declining populations may be unusually sensitive to habitat alteration and degradation. Final RMP/EIS coverage of fisheries resources should be comparable to that provided for terrestrial species. Sensitive and priority habitats should be identified.

Recovery and restoration plans should be developed based on a watershed analysis, NPS Assessment, and 305(b) Reports. In addition, fish habitat and sediment yield should be utilized to establish/predict habitat quality. The final RMP/EIS should include a table summarizing those sub-watersheds where a timber harvest emphasis would occur. Treatments that may further induce population declines should be avoided.

Frissell (1992) states that preliminary analysis of spawner count data available from the Oregon Department of Fish and Wildlife for the period 1986-1990 suggests that watersheds having a high proportion of their drainage basins within roadless areas support a disproportionately large percentage of southwest Oregon's remaining viable wild salmon stocks and much of its important chinook salmon fishery. In addition, recent research indicates that chum salmon are perhaps the most sensitive to logging impacts of the anadromous salmonids. Restoration plans should include identification and preservation of potential refugia. In addition, management treatments should be based on the location of sensitive species and current watershed conditions.

References

Beschta, R.L., W.S. Platts, and B. Kaufmann. 1991. Field review of fish habitat improvement projects in the Grande Ronde and John Day River Basins of Eastern Oregon.

Frissell, C.A. 1992. Water quality, fisheries, and aquatic biodiversity under two alternative forest management scenarios for the west-side federal lands of Washington, Oregon, and Northern California. A report prepared for The Wilderness Society.

Harr, R.D., B.A. Coffin, and T.W. Cundy. 1989. Effects of timber harvesting on rain-on-snow runoff in the transient snow zone of the Washington Cascades. Interim Final Report for the Timber, Fish, Wildlife Program. Pacific Northwest Research Station, Seattle, Washington.

Nehlsen, W., J. E. Williams, and J. A. Lichatowich. 1991. Pacific salmon at the crossroads: stocks at risk from California, Oregon, Idaho, and Washington. Fisheries, Vol. 16 No.2 pp.-4-23.

Sedell, J.R., G.H. Reeves, F.R. Hauer, J.A. Stanford, and C.P. Hawkins. 1990. Role of refugia in recovery from disturbences: modern fragmented and disconnected river systems. Environmental Management Vol. 14, No. 5, pp. 711-724.

AIR QUALITY

The air quality analysis is based primarily on compliance with the Oregon State Smoke Management Plan (OSMP) and the State Implementation Plan (SIP). Blanket statements regarding compliance with applicable plans and regulations do not inform the public or decision makers of actual anticipated air quality impacts. A broad screening level quantitative assessment of air quality impacts is needed to illustrate that burning can be done in compliance with applicable plans and regulations.

Sensitive Air Quality Areas

The draft RMP/EIS (page 3-6) states that "the Oregon Smoke Management Plan (OSMP), a part of the SIP, identifies strategies for minimizing the impacts of smoke from prescribed burning on the densely populated, designated, nonattainment, and smoke sensitive areas within western Oregon." Page 3-6 also mentions "special protection zones". The final RMP/EIS needs to discuss in greater detail and define what is meant by the terms nonattainment, designation, smoke sensitive, and special protection. The regulatory significance of these terms should be disclosed in detail in the final RMP/EIS.

Map 5 in the draft RMP/EIS shows the sensitive air quality areas in western Oregon. The map and the discussion in the final RMP/EIS could be improved if each of the sensitive air quality areas were labeled. The text should identify the sensitive areas that are most likely to be effected by the future site-specific activities in the Salem District. This discussion should also clearly describe why each area has been designated and the significance of each designation.

Regulatory Requirements

The final RMP/EIS should provide a description of all applicable regulatory and/or permit requirements. The Clean Air Act and SIPs require that prescribed burning not cause or contribute to violations of National Ambient Air Quality Standards (NAAQS) or Prevention of Significant Deterioration (PSD) increments. In addition, burning may not cause visibility impairment in federally-designated Class I areas. The

air quality discussion must demonstrate that the proposed action will not cause or contribute to any violations of the NAAQS, that it will not cause air quality to degrade by more than any applicable Class I or Class II PSD increments, and it will not cause or contribute to visibility impairment. A discussion of PSD increment consumption and/or applicability should be included in the final RMP/EIS.

Oregon Smoke Management Plan

The draft RMP/EIS indicates that all prescribed burning activities will comply with the OSMP. The final RMP/EIS needs to fully describe what the OSMP is, what it allows, what it prohibits, and what is protected. The final RMP/EIS should discuss how effective it has been, since its implementation in 1972, in reducing air quality effects. Any monitoring that has been completed to document the effectiveness of the OSMP should be described. Although most problem burns or intrusions can be attributed to unpredicted shifts in meteorological conditions compliance with the OSMP could still result in intrusions. For example, drift smoke from a prescribed burn can be carried by night time drainage winds into designated areas. The final RMP/EIS should discuss whether the OSMP contains provisions to prevent or minimize these types of scenarios.

The final RMP/EIS should discuss whether different permissible burning conditions exist for different subareas within western Oregon and more specifically within the district. Different burning conditions could effect the amount of allowable burning activity under the OSMP and SIP. This in turn would affect the kinds of site preparation that could be considered at the site-specific stage. Any potential burning restraints of this type need to be discussed and fully disclosed in the final RMP/EIS.

State Implementation Plan

The final RMP/EIS should also describe the SIP and its provisions for prescribed burning. The relationship of the SIP and OSMP should be clearly presented. Any restrictions that the SIP could impose on prescribed burning, seperate from the OSMP, should be discussed.

The draft RMP/EIS concludes that prescribed burning will not adversely affect air quality. A more detailed discussion about how the predicted tons of emissions compare to the amount of particulates from prescribed burning that are used in the current SIP calculations is warranted in the final document.

Prescribed Burning

The draft RMP/EIS plays down the significance of the contribution of prescribed burning to the attainment status of the area. Since no adequate models exist to accurately predict the effects of prescribed burning on nonattainment areas a description/comparison of the emissions from prescribed burning, industrial sources, fugitive dust and woodstoves would be helpful to understand the relationship of the sources of particulate matter contributing to the attainment status of the area.

The draft RMP/EIS presents a breakdown of the kinds of burns included in prescribed burning activities. Table 4-1 shows the biomass consumption by alternative as well as the tons of consumption by burn type. Based on our review of the six draft RMP/EISs a number of types of burns are identified: underburn, pile burn, broadcast burn, ecosystem burn, and other burn. The air quality discussion in the final RMP/EIS should be expanded to fully describe these types of burns, explain the burn characteristics, and present the purpose of each type of burn. For example, is ecosystem burning the same as or similar to underburning? Which types of burns are hot and which types are cooler. The temperature of the fire is important since it has an effect on smoke dispersion characteristics.

Under the PA, prescibed burning will include some pile and broadcast burning and a significant amount of underburning and ecosystem burning. EPA understands that underburning is used to reduce undesirable fuel loads without damaging desirable residual vegetation. Due to the cooler burn temperatures with underburning, combustion is incomplete which results in greater particulate emissions. The final RMP/EIS should discuss how the emission estimates for each type of burn are calculated. We noted that the draft RMP/EIS assumed that the emissions from all types of burns were the same. If underburning generates more particulates than broadcast or pile burning then the emissions could be underestimated for underburning. How will the proposed increase in underburning (increased particulates) affect the present consumption rate and the emission reduction since the baseline period was established?

Since the type of burning proposed, underburning, results in more low level smoke over potentially longer periods of time the report should discuss the potential this might have on the number of intrusions per year. The effects of this type of burning and the relative atmospheric loading are highly dependent on the type of vegetation being "underburned". There can be some significant differences in the type of vegetation burned during one of these events. The final RMP/EIS should provide information or estimates on the relative emissions from underburns of different types of vegetation.

Prescribed fire is proposed as the favored tool for site preparation (page S-6). If restoring the natural role of fire in the ecosystem is the objective, as stated, the seasonal timing, intensity, size, and frequency of burns should mimic historic burns. This may be ecologically sound but conflict with air quality objectives related to the OSMP and SIP. The final RMP/EIS needs to provide an expanded discussion of this issue.

We are also concerned about the effects of smoke from underburning on nearby residents and visibility. Typically underburning involves lower fire temperatures which allows the smoke to hug the ground and not attain vertical dispersion. The final RMP/EIS should provide more discussion about the human health and visibility effects from underburning. It should also focus discussion on how regulatory requirements deal with underburning. The final RMP/EIS needs to clarify whether underburning is covered by the OSMP.

Alternative burning techniques exist that can be used to reduce the impact of forestry burning on air quality. These techniques optimize fuel arrangement, fire ignition for rapid and complete combustion, and mop-up techniques. We believe that the air quality discussion would be improved by including a more expanded discussion of what practices BLM has been using and any additional techniques that could be used in the future to minimize air quality impacts associated with prescribed burning. This expanded discussion should focus on the different types of burning proposed in the RMP. More specifically, are there ways to effectively deal with the potential problems associated with cooler underburning type fires?

Finally, the draft RMP/EIS states that "Air Quality, under all alternatives, would not deteriorate to a point that ambient air quality would be adversely affected due to prescribed fire." (page 4-9). The final document needs to provide the basis for this statement. How do the predicted tons of biomass consumption compare to emissions of regulated air pollutants?

The draft RMP/EIS also states that "Prescribed fire is the only resource management activity proposed under any alternative that could have a notable adverse effect on local or regional air quality." (page 4-7) and "...when short-term transitory air quality effects do occur, they could be severe." (page 4-9). These two quotes contradict the first quote. The final RMP/EIS needs to clarify the air quality effects and provide the basis for the conclusions. Further, this brief analysis should not be used as the basis for concluding that future site-specific prescribed burning proposals will have no effect on local sensitive air quality areas or Rural Interface Areas (RIAs). Individual prescribed burning proposals require site-specific analysis of conditions unique to the project under consideration.

Rural Interface Areas

Particulate concentrations that exceed human health standards have been measured up to three miles downwind of a prescribed burn. The final RMP/EIS needs to discuss human health standards and the impact of underburning/ecosystem burning on people living in RIAs and other downwind small communities. We believe that this is a significant issue due to the provisions of the OSMP, the PA burn policy for RIAs, and the increased use of underburning.

We are concerned that the OSMP and the PA will put people in the RIA areas at risk. RIAs are defined as BLM land adjacent to privately owned lands zoned for 1- to 2- acre lots or that already have residential development. None of the alternatives exclude prescribed burning from RIAs. Another related concern is that one of the primary purposes of the OSMP is to keep smoke from forestry burning activities out of densely populated areas. Compliance with the OSMP will put smoke into areas outside of large urban centers and potentially into smaller communities and individual residences in the rural environment. With underburning smoke is more likely to remain close to the ground and remain in low areas longer than would be expected with a hotter pile or broadcast burn.

Alternatives to Burning

The draft RMP/EIS indicates that not all timber harvest units require treatment by prescribed burning. This discussion should be expanded in the final RMP/EIS. A number of alternatives for removal of slash exist that do not involve burning. A general discussion of the types of options would provide useful information.

The draft RMP/EIS indicates that no treatment or mechanical treatment could result in a higher fuel hazard. However, logging residue can be reduced by harvesting systems directed toward maximum utilization of slash material recovery excluding the trees/fiber left for ecosystem/biodiversity purposes. We suggest that the final RMP/EIS include a goal to improve harvesting systems by provide economic incentive for increased slash utilization. Use of slash material is dependent on the capability and efficiency of the forest industry to process low grade fiber. The final RMP/EIS should provide some discussion of the economic and technological feasibility of improved slash utilization and the effect on fuel hazard.

Finally, the final RMP/EIS should address how the decision to burn or not to burn is made. Is this a market driven decision? What are the economics of forestry burning? An analysis of the cost of burning compared to the costs of mechanical removal are warranted. The decision criteria that have been used in the past should be described. More importantly the final RMP/EIS should present the criteria such as cost, silvicultural considerations, air quality considerations, market demand for low grade fiber, and ecosystem considerations that should be evaluated in the future regarding prescribed burning decisions.

Firewood Program

The draft RMP/EIS notes that "[A]lternatives to burning have helped reduce emissions." (page 3-6). One of these alternatives is a firewood program. However, the indirect effect of the BLM firewood program may contribute to reduced air quality. Since firewood sales would be permitted under all alternatives mitigation measures for the firewood program should be considered. Firewood mitigation measures exist.

EPA encourages BLM to consider incorporating the following mitigation measures in the final RMP/EIS.

The Wenatchee National Forest, Naches Ranger District **Personal Use Firewood Environmental Assessment (EA)**, included several innovative mitigation measures to reduce the emission of particulates associated with woodstoves. The mitigation measures have been implemented and they include: (1) a requirement that pieces larger that eight inches in diameter must be split at least once prior to removal to facilitate drying of the wood; (2) the firewood gathering season is closed September 30 each tear to assure that firewood is not collected when wet, and some curing time is available prior to burning; (3) educational and informational materials that highlight firewood gathering and burning practices that minimize effects on air quality are provided with firewood permits; and (4) a requirement to implement a cooperative arrangement with the local air quality agency on public information and education on firewood use and/or enforcement efforts on woodstove burning regulations.

IMPACT DEFINITIONS

The draft RMP/EIS uses the life of the RMP as the basis for defining short-term and long-term time frames for impact conclusion as required by the Council on Environmental Quality CEQ Regulations Implementing the Procedural Provisions of NEPA. The draft RMP/EIS defines short-term as ten years or less and long-term as greater than ten years. However, application of a ten-year time frame is not universally appropriate for all resource categories. EPA is concerned about the application of this definition to the biota found on BLM administered lands. A considerable range in life spans exists. Using ten years to define short-term impacts means that some populations of fish and birds, for example, could experience adverse effects for several generations. This could result in major population and community level impacts.

The definitions of short-term and long-term impact would be greatly improved if the time frame for adverse/beneficial effects was tied to the natural life spans of individual species rather than the arbitrary number that has been chosen. The Department of Interior has consistently used such an approach in the Outer Continental Shelf (OCS) lease sale EISs. These OCS lease sale EISs are not site-specific, they cover large planning areas and the activities in those areas for several years so they are analogous to a RMP/EIS. The OCS impact definitions are based partly on the length of one generation for each species or group of species evaluated. Thus, the time frame of the impact is tied biologically to the species affected. We are enclosing a copy of the OCS impact definitions for your information and consideration for the final RMP/EIS.

In the case of air quality and water quality impacts ten years is not an appropriate time frame for assessing air quality, water quality, or aquatic habitat. A ten year time frame does not comply with regulatory definitions. We suggest that the definition for short-term water and air quality effects should be consistent with state WQS and the SIP. At a minimum short-term air and water quality impacts should exist during the course of specific activities and should be held to the shortest practicable period of time.

SPECIAL STATUS/THREATENED AND ENDANGERED SPECIES

Consultation with U.S. Fish and Wildlife Service (FWS)

Since activities conducted under the RMP could affect threatened or endangered species, the final RMP/EIS should include the Biological Assessment and the associated U.S. Fish and Wildlife Service (FWS) Biological Opinion for the following reasons:

- NEPA requires public involvement and full disclosure of all issues upon which a decision is to be made;
- The CEQ Regulations for Implementing the Procedural Provisions of NEPA strongly encourage the integration of NEPA requirements with other environmental review and consultation requirements (40 CFR 1502.25); and
- The Endangered Species Act (ESA) consultation process can result in the identification of mandatory, reasonable, and prudent alternatives which can significantly affect project implementation.

The potential effects on listed species are relevant to the subsequent project-level decisions. Both the Biological Assessment and the EIS must disclose and evaluate the potential impacts of the proposed action on listed species, such as the peregrine falcon, bald eagle, northern spotted owl, shortnose sucker, and Lost River sucker. Information and related management guidance regarding the recent listing of the marbled murrelet should be added to the final document.

The final RMP/EIS and Record of Decision should not be completed prior to the completion of ESA consultation. If the consultation process is treated as a separate process and the FWS identifies necessary changes in plan implementation which have not been evaluated in the draft RMP/EIS, a supplement to the RMP/EIS could be warranted.

Coordination and Consistency

The draft RMP/EIS presents a great deal of information regarding the northern spotted owl. Since the concern and controversy regarding this species has spanned a number of years, federal agencies, and court cases, there are a number of plans and proposals that address owl populations, habitat, and management. The document should better outline how the alternatives and management direction compare to existing and draft reports and recommendations, such as the Draft Recovery Plan for the Northern Spotted Owl, FWS (1992); Final EIS on Management for the Northern Spotted Owl in the National Forests, USDA Forest Service (1992); Endangered Species Committee Record of Decision (1992); Alternatives for Management of Late-Successional Forests of the Pacific Northwest, Scientific Panel on Late-Successional Forest Ecosystems (1991); A Conservation Strategy for the Northern Spotted Owl, Interagency Scientific Committee (ISC) (1990).

For example, the final RMP/EIS should compare how the protected habitat areas (PHA) and protected habitat area buffers (PHAB) in the draft RMP/EIS compare to the 50-11-40 rule outlined in the ISC report. The draft document states that:

> The ISC originally developed the 50-11-40 criteria as a standard to evaluate dispersal habitat across the landscape. This approach works well in the case of the U.S. Forest Service where there is contiguous federal land ownership. However, over much of the planning area, the BLM administers only half of the forest lands. (page 4-65)

The implication of this discussion is that the 50-11-40 criteria do not apply well to Bureau lands. However, the ISC was convened through the cooperation of three federal agencies, one of which was the BLM. Presumably, the ISC was aware of federal land ownership patterns as it formulated its recommendations. Therefore, the final RMP/EIS should clarify the similarities and differences between the RMP PHA/PHABs and the expected results of application of the 50-11-40 rule and the rationale for choosing one strategy over the other in the final RMP/EIS.

Finally, the final RMP/EIS should address management direction for timber sale areas exempted by the Endangered Species Committee in 1992.

WILD AND SCENIC RIVERS

The draft RMP/EIS recommends different numbers of wild and scenic river segments for designation under the various alternatives. These differing recommendations raise a question regarding how river segments are evaluated and recommended for wild and scenic river designation. The differences in the alternatives

are in management direction and objectives; the physical qualities of each of the river segments under consideration would seem to be the same under each of the alternatives. Therefore, if a river segment is both eligible and suitable for designation, the final RMP/EIS should clarify how it is possible to recommend a given segment in one alternative and not in another.

In addition, not all streams eligible for wild and scenic river designation are studied for suitability in the draft RMP/EIS. The document notes that there will be interim management of BLM land within a half-mile corridor of these streams in order to protect their Outstandingly Remarkable Values. While the text describes some of the elements included in this interim management, such as exclusion of timber harvest in riparian areas and restriction of leasable and salable mineral development, it does not give a timeframe for the "interim." The final RMP/EIS should define the expected time during which these streams will be managed under RMP interim management direction and identify when suitability studies and possible recommendations will be made regarding these streams.

In September 1991 Oregon revised its WQS to add an antidegradation policy under 340-41-026. The policy defines what will be considered Outstanding Resource Waters (ORW) and sets forth a process for nominating and designating such waters. This process is ongoing. The language in the standards states that "The Commission may specially designate high quality waterbodies to be classified as Outstanding Resource Waters in order to protect the water quality parameters that affect ecological integrity of critical habitat or special water quality values that are vital to the unique character of those waterbodies." Priority water bodies for nomination include Wild and Scenic Rivers. With the potential listing of various salmon species as threatened or endangered, it can be expected that critical habitat for these species will be designated as ORW. Waters so designated may not have the water quality lowered except on a short-term basis. In addition, land managers will be expected to fully participate in the development of management plans to protect those waters.

ACCESS

The draft RMP/EIS notes that easements and reciprocal right-of-way agreements provide access to agency lands. It would be helpful if the final RMP/EIS also gave an indication of how much access the BLM provides to intermingled landowners through federal license agreements, easements, and reciprocal right-of-way agreements. the final RMP/EIS should estimate the miles of road that might be constructed by private parties.

The draft RMP/EIS indicates that open road densities would be limited to 1.5 miles per square mile" (page xiii) and that "[New timber harvest roads would be kept

to the minimum necessary for management." (page S-8) Two concerns arise related to this management direction.

First, the draft RMP/EIS calls for the use of an interdisciplinary process to develop the overall transportation systems and the establishment of road management objectives. However, it does not address cooperation with other landowners. The final RMP/EIS should outline how the BLM will coordinate and cooperate with adjacent and intermingled landowners in order to plan, build, and maintain the permanent road system and accomplish road management objectives. For example, similar to the BLM's authorization for cooperative road programs, the Forest Service Road Right-of-Way Construction and Use Agreement (Cost Share) program is also based on authorization from the Federal Land Policy and Management Act of 1976. The Forest Service program includes requirements for annual meetings with road use partners in order to discuss timber management activities; road use needs; road construction plans and standards (including surfacing); and maintenance obligations. The final RMP/EIS should clarify whether the BLM road program includes similar coordination methods that assist in accomplishing road management objectives.

Second, the draft RMP/EIS mentions road closures in a number of contexts throughout the document in conjunction with various management objectives. The term "closed" appears to be used in two ways in the draft RMP/EIS; it can mean either administratively closed (using such means as gates or other barriers) or obliterated (restored to the natural land contour and vegetation). Since both the economic costs and environmental costs of the two methods of closure may differ substantially, the final RMP/EIS should clarify which method of closure is appropriate related to specific issues and objectives. In those cases in which the road will remain on the permanent transportation system but in which road use will be restricted by an administrative closure, the final RMP/EIS should address non-traffic-generated maintenance needs that will ensure that culverts remain unobstructed and ditches are cleaned in order to prevent road "blow outs" during winter storms. In addition, the document should address road maintenance priorities that can guide decisionmaking when funding is not adequate for complete road system maintenance.

Many foresters contend that partial cut and shelterwood systems often require greater road densities than clearcut systems. In addition, partial cut and shelterwood systems may have higher per unit sale preparation costs. Therefore, the final RMP/EIS should further explain how this road density objective will be achieved.

Since helicopter logging is included in the BMP discussion, the final RMP/EIS should include a discussion of noise impacts that could be associated with helicopter use, including the noise levels that might be experienced by those who live or recreate in the vicinity. This is important because helicopters at 500 feet are comparable to sound levels of heavy trucks and city buses heard from the street. This could be significant in areas of very low ambient noise levels. One source of information on

helicopter noise effects in non-urban areas is the draft and final *National Surface Water Survey - Western Wilderness Area Lakes, Environmental Assessment*, EPA 910/9-85-125 and EPA 910/9-85-126, March 1985 and April 1985. [Copies may be borrowed from the EPA, Region 10 library at (206) 553-1259.]

TIMBER MANAGEMENT AND SILVICULTURE

The final RMP/EIS should clarify the BLMs philosophy regarding the annual sale quantity (ASQ) and identify whether it considers the ASQ a goal or a mandated level of timber production. In addition, the draft RMP/EIS assumes that there will be sufficient funding for forestry activities, such as reforestation, thinning, tree improvement, and fertilization, in support of the ASQ level (page 2-41). Since these activities contribute to the ASQ, the final document should identify silvicultural management priorities that could guide activities should they not be sufficiently funded during plan implementation. This is particularly important since estimates indicate that management costs under the PA could be 2.8 times higher than traditional costs per unit output and the draft RMP/EIS assumes that reforestation under the PA will use only genetically improved reforestation stock.

The final RMP/EIS should consider timber sale economics as a management concern for analysis in response to the full public disclosure intent of NEPA and in response to the national controversy regarding below-cost timber sales. The draft notes that growth enhancing practices, such as precommercial thinning, forest fertilization, and pruning will be utilized. (page 2-10). The Appendix Sensitivity Analysis on page 4-112 indicates that both precommercial thinning and fertilization tend to have negative present net values. Therefore, the final document should provide clear descriptions of key assumptions regarding intensive management practices, Interdisciplinary Team costs, sale preparation, timber pricing, product valuation, discount rates, rotation lengths, road and access costs, and road maintenance.

EPA supports and encourages agreements pursued with private landowners and other land management agencies to optimize the extent and distribution of old growth restoration and retention areas while minimizing undue impact on multiple resource use. EPA would also like to encourage coordination with adjacent landowners regarding timber management practices, particularly harvest activities. For example, many public agencies and some private companies have adopted guidelines requiring regeneration on adjacent parcels to be of a certain size (e.g., trees 4 1/2 feet tall) or stocking level before adjacent timber sale units may be harvested.

SOCIOECONOMIC ANALYSIS

The CEQ Regulations state that "When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment." (Section 1508.14). The proposed action will effect small timber communities in western Oregon, the entire state and the Pacific Northwest region. The draft RMP/EIS has evaluated the environmental consequences of the proposal. EPA is providing comments and suggestions on ways to improve the analysis of the social and economic effects.

The socioeconomics analysis concludes that the reductions in timber harvest associated with the PA would be expected to result in significant reductions in employment and income in the affected area. The Klamath Falls draft RMP/EIS provides a somewhat more complete picture than the other five draft RMP/EISs in that it provides an estimate of the state-wide effects of the BLM and Forest Service land management alternatives. We would also recommend the analysis be expanded to include more information on other sectors of the economy.

The current analysis appears to be a static analysis; it implicitly assumes that other sectors of the economy do not change over the analysis period and thus shows the potential effects of the BLM and Forest Service activity in isolation from the rest of the economy. The analysis would be substantially more useful if BLM entered as inputs to its input-output model current forecasts of how other sectors of the Oregon economy are expected to change over the next decade. It is entirely possible that this more holistic economic analysis would show that the regional economy is likely to be employing more people over the next decade; jobs lost in the timber industry may be replaced by jobs created in other sectors of the economy.

A secondary benefit of doing the type of expanded analysis suggested above is that it might provide a picture of what types of jobs might become available in the future and what types of job training or vocational training would assist displaced timber workers in finding new long-term employment. This, in turn, would allow the final RMP/EIS to discuss and evaluate options for Federally sponsored displaced work assistance that might be used to mitigate the adverse employment impacts of the selected management plan. Although such assistance may well be outside the scope of the authority of BLM or the Forest Service, it is not outside the scope of the authority of Congress. The CEQ Regulations encourage the evaluation and consideration of alternatives not within the jurisdiction of the lead agency [1502.14(c)].

Finally, the final RMP/EISs could also be improved if the degree to which the economic activities on BLM managed lands are likely to be economically self-supporting was addressed. A quantitative analysis of each "revenue and cost" stream would allow the audience of the RMP/EIS to understand the magnitude of the subsidies involved and to determine whether continuing these subsidies would be good public policy. In addition to timber harvest revenues, this analysis should include such items as grazing fees and mineral royalties.

FUNDING

The draft RMP/EIS states that "timber sale volumes and associated programs would be reduced if annual funding is not sufficient to support the relevant actions assumed in the plan." (page 2-76). We are concerned that the PA and alternative C will be costlier to implement since they both contain more nontraditional timber management approaches. The draft RMP/EIS indicates that for these two alternatives the costs of nontraditional timber management would be approximately 2.8 times higher per unit of timber sold than for the more traditional timber management alternatives.

The final RMP/EIS needs to describe in greater detail: how BLM funding levels are established each year; whether allocations are based solely on the amount of timber cut; whether each yearly allocation is "ear marked" for specific uses; and what effect this more costly nontraditional timber management will have on the funds available for a variety of nontimber harvest activities. Management of BLM administered lands involves a variety of activities including; data gathering, research, monitoring, cooperation with agencies for management of resident wildlife; completion of management/activity plans; maintenance of recreation facilities; and education programs. The final RMP/EIS needs to describe in greater detail how a funding shortfall will affect the variety of activities included in this plan. Will all activities be cut back equally if funding is not sufficient? Do some management activities have a higher priority for completion than others? Will all resources be equally or adequately protected if funding is less than anticipated or needed?

CONSISTENCY AND COORDINATION

While the Appendix discusses agency efforts to work with state agencies and counties on ways to make the RMP consistent with plans, policies, and programs, of other agencies, the document does not discuss what effort was made regarding National Forest Land Management Plans for adjacent Forest Service lands. If other federal lands are key to the success of an alternative, the final RMP/EIS should clearly outline what types of coordination and cooperation will be a part of plan implementation.

The draft RMP/EIS briefly discusses agreements that "...may be pursued with private landowners and other land management agencies to obtain an optimum distribution of old growth restoration and retention areas while the impact on timber harvest and other resource uses." (page 2-26). This presents a strong incentive for the BLM to pursue coordination, and if possible, consistency efforts with its adjacent landowners, both public and private. The final RMP/EIS should further outline and discuss the purpose, scope, and specific management activities that could be covered in such cooperative agreements.

TIERING AND NEPA COMPLIANCE

The CEQ regulations encourage tiering of NEPA documents.

> Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§ 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. (40 CFR § 1502.20)

While programmatic documents, such as RMPs, provide important management direction, they do not contain sufficient site-specific detail to substitute for site-specific analysis for individual projects implemented under RMP direction. At the site-specific stage it is not appropriate to reference, for example, the air quality analysis in the programmatic document and use it as the site-specific evaluation of air impacts. While the programmatic RMP partially addresses potential air quality impacts in the region, its brief analysis should not be used as the basis for concluding the future site-specific prescribed burning proposals will have no effect on local or regional air quality.

The draft RMP/EIS implies that there may be a second level of planning activity between the RMP level and the individual project level. If activity level planning is another decision-making point in BLM activity scheduling, such decisions are subject to the provisions of NEPA, as are individual project decisions, such as new land use authorizations, timber sales, land adjustments, mining activities, and consideration of silvicultural treatments (including site preparation and prescribed burning proposals).

Further, the final RMP/EIS should provide specific direction regarding the preparation of tiered NEPA documents. The draft RMP/EIS refers a number of times to future tiered Ees, but this should not be construed as a directive to prepare solely Eas for individual projects. In some cases, EISs or categorical exclusions (CE) will be more applicable. Therefore, the final RMP/EIS should identify the criteria for determining what sort of NEPA documentation will be required for future projects (EIS vs. EA vs. CE). In addition, it should provide guidance for the scope of analyses expected in these tiered documents to clarify what analyses and issues are considered completely addressed in the RMP/EIS, and what analyses and issues should be further considered based on site-specific resources and conditions.

L-0787

Table S-2
Definitions Used in Effects Assessment

Effect-Level Definitions				
VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Resource Category				
Water Quality[1/]				
No regulated contaminant is discharged into the water column, or some amount is discharged, but the resulting concentration of contaminant does not exceed the acute or chronic State standards or EPA criterion.	A regulated contaminant is discharged into the water column and resulting concentration of contaminant occasionally exceeds but does not increase the average beyond the chronic State standard or EPA criterion. Turbidity only occasionally exceeds State standards or EPA criterion. Acute State standards or EPA criteria are not exceeded.	A regulated contaminant is discharged into the water column and the resulting concentration of contaminant averages more than the chronic State standard or EPA criterion but does not exceed acute (toxic) State standards or EPA criterion. Average water turbidity exceeds State standards or EPA criterion but does not exceed 7,500 ppm suspended solid concentration. Acute State standards or EPA criteria are not exceeded.	A regulated contaminant is discharged into the water column and the resulting concentration of contaminant is above the acute (toxic) State standard or EPA criterion more than once in a 3-year period. Or, turbidity exceeds 7,500 ppm suspended solid concentration more than once in a 3-year period.	A regulated contaminant is discharged into the water column and the resulting concentration of contaminant is above the acute (toxic) State standard or EPA criterion more than once in a 3-year period and averages more than the chronic State standard or EPA criterion. Or, turbidity exceeds 7,500 ppm suspended solid concentration more than once in a 3-year period and averages more than chronic State standards or EPA criteria.
Biological Resources				
Individuals in a population experience sublethal effects that do not change population abundance or distribution.	A population or portion of a population changes in abundance and/or distribution in a localized area and/or for a short time period.	A population or portion of a population changes in abundance and/or distribution but would recover to its former status within one generation.	A population changes in abundance and/or distribution requiring one or two generations to recover to its former status.	A population changes in abundance and/or distribution requiring three or more generations to recover to its former status.
Endangered and Threatened Species				
No discernible population decline (no lethal effects), but a number of individuals experience sublethal effects and would recover to pre-activity conditions within 1 year.	No discernible population decline (no lethal effects), but a number of individuals experience sublethal effects and would recover to pre-activity conditions within 1 to 3 years. Distribution changes affecting a low number of individuals in a small local area would last no longer than the project.	A population decline (including lethal effects to a low number of individuals), resulting in a minor change in the distribution and/or abundance of the species. The expected duration of the effects on the population is 3 to 6 years.	A population decline resulting in a change in the distribution and/or abundance of the species with recovery in less than one generation or 6 to 10 years.	A substantial population decline that results in a change in the distribution and/or abundance of the species with recovery in more than one generation or more than 10 years.
Economy of the North Slope Borough				
Economic effects that will not have a measurable effect on the economic well-being of the residents of the area. Local employment is increased by less than 20 percent.	Economic effects that may marginally affect the economic well-being of residents of the area. Local employment is increased by 10 to 19 percent for less than 5 years.	Economic effects that will immediately affect the economic well-being of residents of the area. Local employment is increased 10 to 19 percent for at least 5 years.	Economic effects that will significantly affect the economic well-being of residents of the area. Local employment is increased by 20 percent or more for less than 5 years.	Economic effects that will cause important and sweeping changes in the economic well-being of residents of the area. Local employment is increased by 20 percent or more for at least 5 years.

L-0787

Table S-2 (Continued)
Definitions Used in Effects Assessment

Effect-Level Definitions				
VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Resource Category				
Sociocultural Systems				
Periodic disruption of sociocultural systems occurs without the displacement of existing institutions.	Disruption of sociocultural systems occurs for a period of less than 1 year without a tendency toward the displacement of existing institutions.	Chronic disruption of sociocultural systems occurs for a period of 1 to 2 years without a tendency toward the displacement of existing institutions.	Chronic disruption of sociocultural systems occurs for a period of 2 to 5 years with a tendency toward the displacement of existing institutions.	Continuous disruption of sociocultural systems occurs for a period of more than 5 years with a tendency toward the displacement of existing institutions.
Subsistence-Harvest Patterns				
Subsistence resources could be periodically affected but with no apparent effects on subsistence harvests.	Subsistence resources would be affected for a period not exceeding 1 year, but no resource would be unavailable, undesirable for use, or greatly reduced in number.	One or more important subsistence resources would become unavailable, undesirable for use, or available only in greatly reduced numbers for a period not exceeding 1 year.	One or more important subsistence resources would become unavailable, undesirable for use, or available only in greatly reduced numbers for a period of 1 to 2 years.	One or more important subsistence resources would become unavailable, undesirable for use, or available only in greatly reduced numbers for a period of 2 to 5 years.
Air Quality[2/]				
Emissions cause measurable increases in concentrations of criteria pollutants (e.g. SO_2, CO, NO_2, O_3, and PM_{10}) over one localized portion of a Federal attainment area, resulting in the consumption of less than 5 percent of the available Prevention of Significant Deterioration (PSD) increment for NO_2, SO_2, or TSP or 5 percent of the available National Ambient Air Quality Standards (NAAQS) concentration for PM_{10}, CO, or O_3; no observed adverse effects on human health or vegetation; and/or no significant decrease in onshore visibility.[3/]	Emissions cause measurable increases in concentrations of criteria pollutants over more than a localized portion of a Federal attainment area; resulting in the consumption of at least 5 percent but less than 20 percent of the available PSD increment for NO_2, SO_2, or TSP or 5 percent of the available NAAQS concentration for PM_{10}, CO, or O_3; no observed adverse effects on human health or vegetation; and/or significant decrease in onshore visibility.	Emissions cause measurable increases in concentrations of criteria pollutants over more than half of a Federal attainment area (regional effect), resulting in the consumption of at least 20 percent but less than 50 percent of the available PSD increment for NO_2, SO_2, or TSP or 5 percent of the available NAAQS concentration for PM_{10}, CO, or O_3; small but measurable short-term adverse effects on human health or vegetation; and/or significant decrease in onshore visibility.	Emissions cause measurable increases in concentrations of criteria pollutants over more than half of a Federal attainment area (regional effect), resulting in the consumption of at least 50 percent but not all of the available PSD or NAAQS concentration increments; readily identifiable adverse long-term effects on human health or vegetation; and/or significant decrease in onshore visibility.	Emissions cause substantial increases in concentrations of criteria pollutants over an entire Federal attainment area, resulting in consumption of the entire available PSD increment for NO_2, SO_2, or TSP or all of the available NAAQS concentration for PM_{10}, CO, or O_3, causing the area to become a nonattainment area; serious adverse long-term effects on human health or vegetation; and/or significant decrease in onshore visibility.
Archaeological Resources				
Little damaging interaction between an effect-producing factor and an archaeological site occurs.	An interaction between an archaeological site and an effect-producing factor occurs, but effects are temporary and reversible.	An interaction between an archaeological site and an effect-producing factor occurs and results in the loss of archaeological data that are not significant.	An interaction between an archaeological site and an effect-producing factor occurs and results in the loss of significant, but not unique, archaeological information.	An interaction between an archaeological site and an effect-producing factor occurs and results in the loss of unique archaeological information.

L-0787

Table S-2 (Continued)
Definitions Used in Effects Assessment

Effect-Level Definitions				
VERY LOW	LOW	MODERATE	HIGH	VERY HIGH
Resource Category				
Land Use Plans and Coastal Management Programs				
Activities generally conform with existing land use and with policies of local, State, and Federal coastal management programs and land use plans.	Activities infringe on proposed land use, or they conflict with one policy of local, State, or Federal coastal management programs and land use plans.	Activities infringe on existing land use, or they conflict with two policies of local, State or Federal coastal management programs and land use plans.	Activities alter a preferred land use, or they conflict with three policies of local, State, or Federal coastal management programs and land use plans.	Activities are incompatible and displace a preferred land use, or they conflict with four or more policies of local, State, or Federal coastal management programs and land use plans.

Source: USDOI, MMS, Alaska OCS Region.

[1/] LOCAL--Changes in water quality from one or more sources, extending beyond the edge of a mixing zone (100-m radius), but affecting less than 1,000 km² about each discharge. REGIONAL--Changes in water quality over an area of at least 1,000 km² or larger about a discharge source.

[2/] NAAQS are based on the protection of human health. Numerical standards for each pollutant are given in Table III-A-3. PSD increments are supplements to the NAAQS protecting existing high air-quality areas. Regional refers to effects on areas that are as large as, or larger than, about one-half the area of the North Slope of Alaska. Local refers to effects limited to tens of miles near the shoreline. Short term refers to hours, days, or weeks; long term refers to seasons or years.

3/ Visibility criteria are applied only to PSD Class I areas; significance is determined by EPA visibility-analysis guidelines.

L-0787

U.S. Environmental Protection Agency – Region 10

Riparian Area Management Policy

PURPOSE AND SCOPE

This document establishes Region 10 EPA policy on the management of riparian areas, primarily those affected by nonpoint source (NPS) activities. EPA recognizes that riparian areas serve many important functions and possess numerous values, including a major role in maintenance of the quality of the Nation's waters. The national intent of Congress to protect and improve the Nation's waters is established in the Clean Water Act[1]. Riparian areas can provide many uses, such as; recreation, forage, and timber. EPA recognizes that riparian areas can be used for these and other activities if management practices are implemented that protect or restore natural functions.

This policy will:

1) Alert local, state, and federal land managers, owners, and users to EPA's concerns in the riparian area planning and management process

2) Assist the states in Region 10 with the implementation of riparian area protection or improvement in their management programs

3) Provide guidance to Region 10 personnel in the execution of EPA's responsibilities under the National Environmental Policy Act (NEPA)[2], the Clean Air Act[3], and the Clean Water Act.

DEFINITION

Riparian areas are zones that influence and are strongly influenced by an adjacent aquatic environment. They occur as complete ecosystems or as an ecotone between aquatic and terrestrial ecosystems, but have distinct vegetation and soil characteristics because of seasonally free and unbound soil moisture. These areas are associated with rivers, lakes, reservoirs, and intermittent, or perennial streams. They may also be adjacent to springs, seeps, wetlands, and ephemeral streams.

Topographic relief and presence of depositional soils most strongly influence the extent of water regimes and associated riparian zones. Thus, the boundary of a riparian area varies from site to site and must be determined for each specific location. Some riparian areas are defined as wetlands. Others are not, because they do not possess the necessary hydrologic water regime, a predominance of hydric soils, or a prevalence of hydrophytic vegetation as described in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

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L-0787

FUNCTIONS AND VALUES

Healthy riparian areas are critical to environmental quality. Their presence increases landscape and species diversity and productivity. Continuous interections occur between riparian areas, aquatic, and terrestrial ecosystems through exchanges of energy, nutrients, and movement of plant and animal species. Specific functions resulting from these interections vary considerably from area to area. Their value is relative to these functions, and the potential that they have to carry out these functions. Some of the functions include:

- Water quality protection and improvement
- Habitat for aquatic and terrestrial life
- Improved channel and bank stability
- Flood storage and desynchronization
- Groundwater recharge and discharge
- Sources of primary production (detritus) for streams
- Aesthetics

RIPARIAN MANAGEMENT POLICY

Review of Section 319 Projects and Proposals

EPA considers the protection, improvement, and restoration of riparian areas and the abatement of NPS pollution affecting riparian areas as a high priority for funding through Section 319 of the Clean Water Act. EPA will expect to see riparian areas addressed in all watershed improvement grant proposals. Attention will be focused on the condition of the riparian areas and the expected impact on riparian areas by treatment in the entire watershed.

Review of NEPA Documents and Natural Resource Management Plans

EPA will expect riparian areas to be addressed in environmental impact statements and program or project plans. EPA will consider functions and values in assessing riparian area project impacts. EPA will actively promote alternatives which reduce or minimize adverse environmental impacts to riparian areas. Recommended alternatives should protect, restore, or improve riparian area functions and values.

Protection of Designated Water Uses

EPA recognizes that healthy riparian areas are valuable and critical to the protection of designated water uses and meeting states' Water Quality Standards. EPA expects States and their Designated Management Agencies to recognize riparian functions and include degraded riparian areas when assessing water use impairments.

Monitoring of Riparian Areas

EPA believes riparian area monitoring should be a high priority for any NPS management program. Monitoring is critical for land managers to evaluate their success in meeting their objectives for improving and protecting riparian areas and water quality. When monitoring results indicate violations or other problems, adjustments can be made in the practices implemented on the riparian area and the entire watershed ("feedback loop"). EPA will actively promote environmental monitoring at a level consistent with the condition of the riparian area and the sensitivity of the designated water uses.

Public Education and Involvement in Riparian Areas

EPA will use reviews of Section 319 grant proposals, NEPA documents, program and project plans, conferences, prepared presentations, information exchanges, and distribution of written materials to increase the awareness of and responsibility for healthy riparian areas. EPA will also encourage and support efforts that directly involve people in local activities to protect, improve, and restore healthy riparian areas. The goal of these actions is to have a motivated, educated public who understand the value of and critical need for healthy riparian areas.

Site-Specific Prescriptions

EPA will encourage and support innovative solutions to site specific problems in riparian management.

L0787

LEGAL AUTHORITIES

[1] Clean Water Act (33 U.S.C. 466 et seq.) Section 101 (a):

> "The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the Nation's waters...
>
> (7) It is the national policy that programs for the control of NPS of pollution be developed and implemented in an expeditious manner so as to enable the goals of this Act to be met through the control of both point and nonpoint sources of pollution."

[2] National Environmental Policy Act (42 U.S.C. s4321 et seq.) states in part:

> "The Congress authorizes and directs that, to the fullest extent possible...all agencies of the Federal Government shall...identify and develop methods and procedures...which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in the decision-making along with economic and technical considerations."

[3] Clean Air Act (Section 309) (42 U.S.C. 7609, Public Law 91-604 12(a), 84 Stat. 1709) requires:

> the EPA to review and comment in writing on the environmental impact of any matter relating to the duties and responsibilities granted pursuant to the Act or other provisions of the authority of the Administrator, contained in any: (1) legislation proposed by a Federal department or agency; (2) newly authorized Federal projects for construction and any major Federal action, or actions, other than a project for construction, to which Section 102(2)(C) of Public Law 91-190 applies; and (3) proposed regulations published by any department or agency of the Federal Government.

Dana A Rasmussen 3-12-91

Dana A. Rasmussen
Regional Administrator
EPA, Region 10

Date

L-0800

CITY OF KLAMATH FALLS, OREGON
AN EQUAL OPPORTUNITY EMPLOYER
P. O. Box 237
97601-0361

SISTER CITY
ROTORUA, NEW ZEALAND

December 21, 1992

Cathy Humphrey
RMP/EIS Team Leader - BLM
Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, OR 97603

Re: Comments for City of Klamath Falls

Dear Ms. Humphrey:

On behalf of the City of Klamath Falls, City Manager James Keller has this date submitted to the Bureau two volumes of comments to your draft RMP/EIS for the Klamath Falls Resource Area. Please be advised that these comments are fully endorsed and supported by the office of the Mayor.

Sincerely,

George C. Flitcraft
Mayor

Todd Kellstrom
Mayor Elect

500 KLAMATH AVENUE
FAX 883-5399
MAYOR & COUNCIL/CITY MANAGER/RECORDER 883-5318
CITY ATTORNEY 883-5323
FINANCE DIRECTOR 883-5316
ACCOUNTS PAYABLE/RECEIVABLE 883-5308
ASSESSMENTS & INFORMATION 883-5310
MUNICIPAL COURT 883-5311
PERSONNEL 883-5317
UTILITIES CONNECTS, DISCONNECTS & BILLINGS 883-5301

2680 MEMORIAL DRIVE
CEMETERIES 883-5382

226 SOUTH FIFTH STREET
FAX 883-5390
PUBLIC WORKS 883-5363
PLANNING/COMMUNITY DEVELOPMENT 883-5361
UTILITIES MAINTENANCE 883-5366
BUSINESS LICENSES 883-5360
PARKS & RECREATION 883-5371
ENGINEERING 883-5365

AREA CODE 503

L-0805

EUGENE (GENE) D. TIMMS
~~HARNEY~~, LAKE, MALHEUR,
KLAMATH COUNTIES
DISTRICT 30

REPLY TO ADDRESS INDICATED
☐ Senate Chamber
Salem, OR 97310-1347
☐ 1049 N Court
Burns, Oregon 97720

OREGON STATE SENATE
SALEM, OREGON
97310-1347

December 22, 1992

Cathy Humphrey, RMP/EIS Team Leader
BLM - Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, Oregon 97603

Dear Ms. Humphrey,

I feel compelled to register my concerns with the Preferred Alternatives outlined in the Resource Management Plan and Environmental Impact Statement which will result in a ten-year plan for the BLM lands.

As is noted by BLM staff, the Preferred Alternatives will have a negative impact on key Oregon industries such as timber and agriculture.

I do not understand how we have come to this predicament. BLM lands have been used for decades as multiple use lands that provide a base for economic activity. It now appears there is another agenda that would take productive lands and set them off for recreation, etc. Where was the public input that led to the Preferred Alternatives. Can they be altered at this time? Have you considered the key industries, the County governments and the regional public in your decisions?

It would constitute a serious set back of our economy if these plans were to go from draft to final with little change. I request that this train be stopped dead and the public be called in as a partner to assure realistic uses of the public BLM lands. Please change the timetable for consideration of public comment, and work much closer with the public in reaching conclusions such as Preferred Alternatives.

Sincerely,

Gene

Gene Timms
Senate Republican Leader

L-0817

Karuk Tribe of California

ADMINISTRATIVE OFFICE:
POST OFFICE BOX 1016
HAPPY CAMP, CA 96039
(916) 493-5305

Natural Resources Department
P.O. Box 282
Orleans, CA 95556
(916) 627-3446

December 21, 1992

Barron Bail, Area Manager
Bureau of Land Management
Klamath Falls Resource Area
2795 Anderson Avenue, Bldg. 25
Klamath Falls, OR 97603

Dear Mr. Bail;

We are providing comment on the Bureau of Land Management's Resource Management Plan for the Klamath Falls Resource Area. The Karuk Tribe of California is a sovereign aboriginal People, that have lived within the Klamath River Basin since time immemorial. Our people rely on the clean and productive waters of the Klamath River for subsistence and ceremonial purposes, as-well-as recreation and enjoyment.

Since the mid 1800's, water quality within the Klamath River Basin has steadily become degraded. Land and water uses over the years have transformed the river and landscape so dramatically that the salmon, steelhead trout, sturgeon, and eel populations of the River have declined below subsistence fishing levels. Presently, Klamath River salmonid populations are at an all-time low, resulting in a severe loss to commercial, sport and Native American fisheries.

The American Fisheries Society has identified that spring chinook salmon in the Salmon River and fall chinook salmon in the Shasta River are at a high risk of extinction. The situation has reached emergency proportions. Poor returns of adult salmon this year will further reduce Klamath salmon and steelhead trout populations in years to come and may result in the listing of fish species downstream onto the Endangered Species List. Any human activity that could further degrade Klamath River conditions should be prevented.

Although we have not received a copy of your Resource Management Plan for the Klamath Falls Resource Area, we are aware that in your preferred alternative you have designated the Klamath Canyon as an Area of Critical Environmental Concern. We support your efforts to protect this area and look forward to the opportunity to review your

L-0817

plan to determine if cultural, fisheries and other concerns affecting Indian Tribes are adequately represented. On July 23, 1992, the Karuk Tribe adopted resolution 92-R-52, which expresses our position regarding inadequate water flows into the Klamath River mainstem caused by the operations of upstream hydroelectric and diversion dams. We hope that your preferred alternative will adequately protect the Klamath Canyon Area and prevent any further environmental impacts to the Klamath River.

Sincerely,

Robert B Rohde

Robert B. Rohde
Natural Resource Manager

L-0895

United States Department of Agriculture
Forest Service
Pacific Northwest Research Station
Forestry Sciences Laboratory
3200 S.W. Jefferson Way
Corvallis, Oregon 97331

Reply To: 4060-3

Date: December 21, 1992

Judy Nelson, District Manager
Bureau of Land Management
P.O. Box 151
Lakeview, OR 97630

Dear Ms. Nelson:

I have recently gone through the Draft Resource Management Plan for the Klamath Falls Resource Area of the Lakeview District of the Bureau of Land Management and have some comments to make in regards to the plan. My comments pertain to established and/or proposed Research Natural Areas on the district.

In Chapter 2, Table 2-6 the plan states that Old Baldy proposed ACEC/RNA will be open to grazing and limited ORV use. I do not feel either of these uses are compatible with an RNA designation. RNAs are set aside to preserve examples of all significant natural ecosystems to compare with those influenced by humans; to provide educational and research areas for ecological and environmental studies; and to preserve gene pools for typical and rare and endangered plants and animals. Grazing and ORV use would certainly compromise the utility of Old Baldy to act as a benchmark area.

The above mentioned table also states that the Old Baldy would not be available for planned timber harvest. It would be better if it said no timber harvest as things like salvage sales and firewood gathering are also not appropriate.

I was pleased to see that a management plan will be written for Old Baldy. Our experience is that management/monitoring plans really help in gaining support for the areas and in informing all likely people how and why we have RNAs. The

BLM - LAKEVIEW DISTRICT OFFICE
RECEIVED:
DEC 24 '92

L0895

Pacific Northwest Interagency Natural Area Committee has produced guidelines for writing management/monitoring plans for RNAs and hope the District will consider using them.

If you have any questions regarding my comments, please do not hesitate to call me (750-7360).

Sincerely,

Sarah E Greene

SARAH E. GREENE
Research Natural Area Scientist
Pacific Northwest Region

cc C. McCaffrey
District RNA Coordinator

L-0897

United States Department of Agriculture
Forest Service
Pacific Northwest Region
P.O. Box 3623
Portland, OR 97208-3623
333 S.W. First Avenue
Portland, OR 97204

Reply To: 1920

Date: December 21, 1992

Mr. D. Dean Bibles
State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

Dear Mr. Bibles:

I appreciate the opportunity to review and comment on the six draft Resource Management Plans/Environmental Impact Statements you recently sent out for public comment. I have attempted to coordinate and consolidate the reviews of the documents done by Forest Supervisors and by this office; the enclosed papers and letters constitute my response to the draft documents.

Overall, I am impressed with the depth and thoughtfulness of the draft plans; your staff and all those involved are to be commended. However, I do have some concerns about how the draft Resource Management Plans deal with the northern spotted owl. The draft Resource Management Plans propose to adopt a different approach for management of the northern spotted owl than either the ISC strategy or the draft Recovery Plan. Because of this we expect to have to compensate with a new alternative in our Supplement to the FEIS on management for the northern spotted owl.

I believe either the ISC strategy or the draft Recovery Plan provides a common basis for cooperation in meeting spotted owl recovery needs and achieving our agency land management goals and objectives. As you develop your final plans, I recommend that we work together to develop plans that will be compatible with the Recovery Plan developed by the Fish and Wildlife Service, and thus avoid differences or impacts between our agencies that could result in less than optimum results for both spotted owl recovery and effective management of public lands.

Sincerely,

JOHN E. LOWE
Regional Forester

Enclosure

DEC 28 1992

L0897

1. Northern Spotted Owl

Commendations:

The BLM should be commended for the major shift toward a more multiple-use management emphasis.

We wish to thank those BLM employees who helped us with information during our review. In every case, that assistance helped us understand more of the protection being offered to the spotted owl.

We appreciate and commend BLM for their continued support and conduct of spotted owl-related research, both within the BLM and cooperatively with others including the Forest Service.

Background:

In January 1992 the Forest Service completed a Final Environmental Impact Statement (FEIS) with a preferred alternative to manage according to the ISC Strategy. The FEIS contained a spotted owl viability assessment for each of the five alternatives analyzed. A primary element of that assessment was the assumption that the BLM would "...manage their lands with a level of spotted owl protection similar to that of the ISC Strategy" (FEIS 3&4-40). The Supplement to the EIS now being prepared will use a viability assessment based upon the assumption that the BLM will manage according to the Preferred Alternative in the Draft Resource Management Plans (RMPs). As a result, a modification of the Preferred Alternative will likely be necessary.

We have compared the Preferred Alternatives for the Draft RMP's with the ISC Strategy. Relative to the ISC Strategy, the Draft RMPs:

- Result in 62,000, or 8 percent, fewer acres of owl habitat at year 10 and 71,000 fewer acres at year 50. Similarly, there is a 4-percent reduction in old-growth after 10 years, a 6-percent reduction in old growth after 100 years, and a 6-percent reduction in "blocks" of habitat in 10 years;

- Do not protect home-range size areas (Category III HCAs) for all currently known and future pairs of spotted owls in the Oregon Coast Range Area of Concern;

- Do not adopt the 50-11-40 rule but instead describe management that will delay, for 40-50 years, the development of forest stand conditions which meet the dispersal standards set forth in the ISC Strategy. This results in 385 fewer quarter townships meeting the 50-11-40 rule at years 30-40, and;

- Schedule timber harvest on 143,000 acres within HCAs. The scenario put forth for the silvicultural creation of suitable habitat for the northern spotted owl over a number of decades is presented as if the outcome is certain. Some acknowledgement of the risk should be included. It is uncertain whether biologists can adequately describe owl habitat, whether prescriptions can be written to achieve that habitat, whether such prescriptions can be successfully implemented, whether monitoring will be designed and implemented that will measure success of the implementation, and whether monitoring will result in appropriate adjustments to treatments.

L0897

Viability Rating and Mitigation:

It appears that these differences will affect the viability of the northern spotted owl on the National Forests. The ISC "...concluded that the owl is imperiled over significant portions of its range..." and "..in some portions of the owl's range, few options for managing habitat remain open.." (ISC page 1). The ISC also reported that "The situation for dispersal habitat on BLM lands is not good and getting rapidly worse. We consider the BLM lands to the weak link in the proposed strategy..." (Q&As on A Conservation Strategy...., question #66.) Thus, because of the breakup of normal dispersion patterns and the resultant risk of isolation of the coast range, substantial corrective actions in order to ensure long-term viability on National Forests may be required. If so, mitigation would likely focus on increasing the size of HCAs on the Siuslaw National Forest and at critical links between physiographic provinces to increase the future population of spotted owls in order to increase probabilities of successful movement of owls among physiographic provinces.

Recommendation:

The Forest Service and BLM are currently working on EIS's that include management strategies for the northern spotted owl. We recommend (1) that the BLM adopt a strategy for managing the northern spotted owl which is consistent with the ISC Strategy and/or the Recovery Plan, and (2) that strategy be incorporated into the Resource Management Plans.

2. NEPA-Related Comments

Since all of the RMP's/EIS's are similar, comments apply to all of the documents.

A. Documents seem to be well written, easy to understand, and have all of the parts mandated by the CEQ regulations for implementing NEPA (40 CFR 1500-1508). They also make good use of maps, charts, graphs, and pictures.

B. Documents are set up to make a wide variety of decisions, much the way the Forest Service did during the first round of Forest Plan development. With a purpose and need of providing a "... comprehensive framework for allocating and managing the natural resources in the area within the principles of multiple use and sustained resource yield" (Klamath Falls Resource Area RMP and EIS), the BLM is forced to look at a broad list of issues and a broad range of alternatives. Had they been able to build on previous planning efforts and narrow the scope of this analysis to the "things that need changing," they may have had a much less cumbersome planning process.

C. The documents never spell out clearly what decisions will be made as a result of this analysis. At a glance, it appears that decisions are being made about management direction for a variety of resources, land allocations are to be made, areas of critical environmental concern are being selected, and possibly some recommendations are to be made regarding Wild and Scenic River suitability but a reader must really search to figure these things out.

D. The EIS's discuss effects on global climate. We have taken the approach to date that this is outside the scope of our analyses and that there is too little information available to provide a reasonable estimate of effects.

3. Timber Modeling and ASQ Calculation (Salem District Draft Resource Management Plan)

The methods used to model timber are described in Chapter 2 and Appendices 2-A to 2-D. In general these sections are well organized, clear, and concise. The methodology for estimating empirical yields, projecting future yields, and assigning timber harvest methods and silvicultural treatments for a given alternative appear logical and sound. The explanation and rationale for the genetic "tree improvement" program is written in terms that the general public should understand.

Appendix 2-D describes the Best Management Practices and the classification system used to identify unsuitable and restricted ground. The recommended practices for each classified area are also clearly explained. There is no table showing the acreage within each land classification, however. This table would help the reader determine the significance of these restricted areas.

The harvest scheduling and ASQ calculations for this Draft Plan are based on a premise that the Non-Declining-Yield constraint limits harvests for the first decade. Given the emerging concerns over threatened and endangered species, watershed protection, and other cumulative effects, this premise may be false. On most National Forest lands in western Oregon, the first-decade harvest acreage is most limited by the requirements to meet existing standards and guidelines. In the past few years the available timber management acreage has declined, with the removal from the base of relatively undeveloped areas (e.g., spotted owl HCA's, etc.). The areas that remain in the base are generally heavily impacted by past cutting and cannot be harvested now at their long-term sustained-yield level. On BLM lands, which are often intermingled with private ownerships, these short-term harvest limitations may be as severe.

For Alternative D only, a data base model was used to ensure that the 50-11-40 requirement for spotted owls was met. We recommend that you expand this model to include other "cumulative effect" factors which may limit your harvest level in the coming decade. This model could calculate the allowable harvest acreage for each relevant subarea of the District for the coming decade(s) and be used in conjunction with the TRIM-PLUS model. Alternatively, a short-term linear programming model (FORPLAN or SARA) could be used to determine the potential harvest acreage by subarea and type in the first few decades of the plan.

4. Forest Pest Management

A. GENERAL COMMENTS

1) We are impressed with the change in emphasis for BLM management that these Resource Management Plans indicate. In general, the plans appear to be genuine first efforts to develop something approaching a sustainable ecosystem management program. They certainly do not represent "business as usual."

2) The documents are quite well organized and obviously represent a great deal of work.

3) In our opinion, the practice of defining a program or concept at the beginning of the documents and subsequently using an acronym or only the initials of that program or concept is confusing, needlessly obscure, and extremely annoying. It would be much better to avoid these kinds of shortcuts altogether. Use of the fully spelled-out words would make the documents much more readable.

4) The documents need editing. In particular, the spelling of scientific names should be checked thoroughly. For example Phellinus, the genus of the most important forest pathogen in western Oregon, is spelled "Phillinus" several times in the Roseburg District Plan. Also, references need to be checked. Some that appear in the texts are not listed in the respective References Cited sections.

B. SPECIFIC COMMENTS RELATIVE TO VEGETATION/INSECT AND DISEASE MANAGEMENT

1) When referring to competing vegetation management, all Resource Management Plans are tiered to the BLM's 1989 EIS, Western Oregon-Management of Competing Vegetation. Noxious weed references are tiered to the 1987 Supplement, and Record of Decision, to the 1986 EIS, Northwest Noxious Weed Control. This appears to be a reasonable approach, and we believe that the documents to which they are being tiered are of good quality.

2) In our opinion, none of the Resource Management Plans adequately addresses insect and disease concerns. Coverage is superficial and vague, and the plans, as written, strongly imply that insects and diseases are not important. We are particularly concerned about the following points:

a) Insects and diseases are not mentioned in any issues or concerns. Forest health is mentioned peripherally, but the insect and disease components are, for the most part, ignored. Existing conditions of insects and diseases in management areas are not addressed or are superficially addressed (with the exception of the Klamath Falls Resource Area Plan), and quantitative data (which are available) are not included. Monitoring of insect and disease effects will be impossible since there is no base line for comparison. Little or no effort is made to project effects of new management practices on future insect and disease impacts. Some of the proposed management changes will affect insect and pathogen populations profoundly.

We believe that significant insects and pathogens should receive treatment as important concerns or planning considerations under at least the "timber production practices" issue raised in all the plans. Specifically, laminated root rot and Douglas-fir beetle should receive coverage in westside District plans (where they presently receive only brief mention). Pine bark beetles, dwarf mistletoes, Armillaria root disease, and annosus root disease should be addressed in the Klamath Falls Resource Area plan. They are discussed in the draft but should be addressed in much greater detail.

b) Many of the plans refer to insects and diseases as "natural components of the ecosystem" and seem to imply that, under that reasoning, there is little need to consider their management. While it is true that insects and pathogens are natural ecosystem components, so are fires, vegetation that competes with trees, animals that consume trees, heavily stocked stands, etc. We suggest that insects and pathogens are "agents of change" that should concern the forest manager just as much as those other forces that managers traditionally attempt to influence. There certainly will be cases where active management of insects and diseases will not be desirable but, in such cases, a competent manager should know the consequences of the no-action alternative. As the plans now stand, this will not be the case.

c) The plans repeatedly indicate that control methods will be applied to insects and pathogens if large outbreaks develop. We believe this is a poor way to manage insects and diseases. The preferred method of managing populations of insects and pathogens is to use a prevention approach with the goal of never allowing epidemics to develop. Integrated pest management techniques, including silvicultural manipulation of stands to prevent the development of conditions favorable for damaging population increases, is our preferred method.

d) The plans address the need to practice very intensive forestry on areas being managed primarily for the timber production objective. Thinning, use of genetically superior planting stock, competing vegetation management, etc., are advocated as methods to increase production. Use of proper management techniques for insects and diseases should be included as important methods for reducing timber growth loss and mortality.

e) Effects of insects and diseases on management objectives other than timber production are hardly mentioned at all. At the very least, the potential impacts of insects and diseases on these objectives should be outlined and estimated.

f) These documents do not contain an accepted definition of "forest health." We consider a desired state of forest health is a condition where biotic and abiotic influences (i.e., insects, diseases, atmospheric deposition, fire, silvicultural treatments, harvesting practices) do not threaten ecosystem sustainability and attainment of management objectives for a given forest unit now or in the future. Other definitions exist. All the BLM plans refer to improving and promoting forest health. However, most of the plans do not indicate how the term is defined. Several of the plans suggest that various activities (such as retaining a certain number of trees following a harvest, for example) will ensure forest health. As most of the plans are now written, there is no way to judge whether such statements have any meaning. We suggest a single, coherent definition be adopted and used in all the plans.

5. Rural Interface

United States Department of Agriculture
Forest Service
RO

Reply to: BLM Draft Plans

Date: 12/14/92

Subject: Rural Interface

To: Director, Land Management Planning

The purpose of these comments is to aid in the response by the Forest Service to the Bureau of Land Managmement Draft Resource Management Plans for the State of Oregon.

The Bureau of Land Management Draft Plans for each of the districts in Oregon are tiered to the Medford District Draft Management Plan on the issue of Rural Interface. Rural Interface is an issue that has been identified as affecting decisions of federal and state agencies in formulating land management goals. Theory from the draft management plans on Rural Interface states that if a change in the social values for an area occur, "traditional activities" will be curtailed or have a greater cost. Nationwide, there are changing social values. The overall increase in population is a primary factor. This increase is coupled with a shift in the rural portions of states from those families that earned a living directly from the land to the families that choose to reside in the rural setting without a tie economically to the land base. Taken together, the social value system for rural areas has shifted.

The differences between the Forest Service and the Bureau of Land Management on the issue are reflective of the mission for each agency. Central to the Forest Service mission is the focus on the people element and the role they play in land management. Programs for the Forest Service range through the continuum of human interaction within ecosystems that begin in the urban environment and grade outward to the low level of interaction found in the wilderness. Because of these program elements, the Forest Service disagrees with the analysis on Rural Interface and the decisions in land allocations that are based on that analysis.

Analysis Methods

The analysis is based on the premise that conflict between the agency and the public is directly related to distance of management activities from residences. Potential lot size along with the distance from the property boundaries is then used to develop the degree of potential conflict to land management activities.

This is too simple to reflect the complicated interactions within the Rural Interface. As stated in the document (Ch 3-123), counties' efforts at zoning large lot size have been unsuccessful in facilitating public land management activities. Conflict still occurs regardless of distance. Public involvement, type of activities, history of relationships, and timing of activities also play a role in estimating the degree of conflict.

Landowner surveys within the Non-Industrial Private Forest (NIPF) ownership group, recently completed by Washington and Oregon, indicated the land ethic of these individuals is high. Forest Service programs focused at enhancing good land stewardship by the landowner has had good acceptance. Data regarding timber supply and rates of conversion indicate that this landowner group has a willingness to manage their lands for commodities. These results are not consistent with the distance/conflict theory of the Bureau of Land Management.

Conflict Avoidance through Buffering

The conclusion from the analysis is that if Federal lands are buffered with minimum management prescriptions, conflicts with local landowners will minimized. Given the heated debate on the multitude of issues facing land management agencies, this is not a likely result. It would be more appropriate to consider a direction in dealing with conflicts which states that conflicts will occur and that a project success will be based on project selection, building a public involvement process that gains consensus on the objective, and clearly defining the decision space for the manager.

Direction to Counties on Secondary Lands

The State of Oregon has given new direction to the counties mandating that they designate the Secondary Forest Land Zone by January 8, 1993. This will reduce the number of potential residences. Any allocations by the Bureau of Land Management should be reflective of this change.

Forest Service Objectives

Forest Service objectives in regards to the Rural Interface are to implement the policy given by Congress to work through and in cooperation with State Foresters in implementing Federal programs affecting non-Federal forest lands. It is important to the Forest Service role to operate its programs affecting non-Federal lands within the regulatory framework of State and local government. The Forest Service will provide assistance to develop multiple-resource forest management plans that meet landowner objectives and provide sound stewardship of all natural resources. Programs such as rural development will help look at framing our future land management decisions. On the National Forest, decisions for Special Use Permits will consider local government direction to avoid unnecessary encumberances.

6. Comments from the Siskiyou and Rogue River National Forests (Medford District Plan)

United States Department of Agriculture
Forest Service
Siskiyou National Forest
Rogue River National Forest

Reply to: 1950/1920

Date: November 19, 1992

Subject: Medford BLM Plan

To: Regional Forester, R-6

Here is the combined Siskiyou and Rogue River National Forest response to the proposed Medford BLM District plan.

The Medford District has done a fine job of planning. Specific items which warrant comments are:

1) The water quality, stream ecosystem, and riparian ecosystem objectives are consistent with those of the National Forest lands. The watersheds deferred from timber harvest due to potential cumulative effects are also consistent with Forest Service objectives.

2) Coordination between the Siskiyou National Forest, Rogue River National Forest, and Medford BLM District will continue to be essential for achieving planning objectives associated with old growth and mature forest habitat, connectivity areas, Research Natural Areas, and Threatened and Endangered Species habitat. Activity within the old growth emphasis areas will need coordination with the Fish and Wildlife Service and their Final Recovery Plan for the northern spotted owl, and the National Forest regional FEIS for the northern spotted owl to ensure informed decisions. Both Forests will continue to contact the BLM staff to ensure coordination in these areas is ongoing before the BLM FEIS is finalized.

The emphasis items for ecological management and forest health in the areas programmed for timber harvest are to be commended. The type of regeneration harvests on the Southern General Forest Management Area, the leave trees on the Northern General Forest Management Area, snag management, and large woody material management will provide a healthier ecosystem for the entire area.

We think that the ecosystem connection between the Siskiyou and Cascade mountains is essential to consider. It appears that the management schemes on BLM lands in that area are appropriate to protect this connection/genetic pathway although they do not identify this connection specifically as being important.

3) We have noted only one significant inconsistency between National Forest land allocations and adjacent BLM management. The Rogue River N.F. has identified winter range along the western portion of Butte Falls Ranger District and the southwestern portion of Prospect Ranger District. BLM has identified significant amounts of big game winter range on their District but omitted this obvious area adjacent to Butte Falls and Prospect Districts.

4) In reaction to the Rogue River National Forest LRMP, the local chapter of the Motorcycle Rider's Association appealed. The RRNF has been working with

L0897

this group since that time as well as some representatives of Medford BLM and Siskiyou N.F. Through a lot of effort from the Motorcycle Rider's Association, we see an increasing coordination between a coalition of trail users and agencies to plan on a valley wide basis. The Medford BLM plan notes that ORV use demand will not be met with the preferred alternative. Perhaps their plan could better reflect the need to respond to this use. In any case, we look forward to coordinating Access and Travel Management with BLM, other land owners, and users across the Rogue Valley.

We applaud the significant efforts BLM has made to address ecosystem management and believe the state-wide coordination they have done is noteworthy as we proceed with our planning efforts. The Medford BLM PLan reflects significant thinking and energy toward ecosystem management and we should glean what we can from that fine job. Some of the data displays also were well done and worth taking note.

We look forward to coordinate any future decisions as our dynamic forest planning process and the BLM process continue.

/s/Abel M. Camarena for	/s/ James T. Gladen
J. MICHAEL LUNN Forest Supervisor Siskiyou National Forest	JAMES T. GLADEN Forest Supervisor Rogue River National Forest

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L0897

7. Comments from the Siskiyou National Forest (Coos Bay District Plan)

United States Department of Agriculture	Forest Service	Siskiyou National Forest	Rogue River National Forest

Reply to: 1950/1920 Date: November 23, 1992

Subject: Coos Bay District BLM Resource Management Plan

To: Regional Forester, R-6

Enclosed is our response to the proposed Coos Bay District Resource Management Plan.

The Coos Bay District has done a fine job of planning. The following comments are provided:

1) The water quality, stream ecosystem, and riparian ecosystem objectives are consistent with those of the National Forest lands, although implementation of these objectives varies between agencies.

2) Coordination between the Siskiyou National Forest and Coos Bay BLM District will continue to be essential for achieving planning objectives associated with old growth and mature forest habitat, connectivity areas, Research Natural Areas, and Threatened and Endangered Species habitat. Activity within the old growth emphasis areas will need coordination with the Fish and Wildlife Service and their Final Recovery Plan for the northern spotted owl, and the National Forest regional FEIS for the northern spotted owl to ensure informed decisions. We will continue to contact the BLM staff to ensure that coordination in these areas is ongoing before the BLM FEIS is finalized.

The emphasis items for ecological management and forest health in the areas programmed for timber harvest are to be commended. The leave trees on the General Forest Management Area, snag management, and large woody material management will provide a healthier ecosystem for the entire area.

We think that the ecosyetem connections are important and will also require continuing coordination and cooperation.

We applaud the significant efforts BLM has made to address ecosystem management and believe the state-wide coordination they have done is noteworthy as we proceed with our planning efforts. The Coos Bay BLM PLan reflects significant thinking and energy toward ecosystem management. Some of the data displays were also well done and worth taking note.

We look forward to coordinating any future decisions as our forest planning proceeees continue.

/s/ Abel M. Camarena (for)
J. MICHAEL LUNN
Forest Supervisor

L0897

8. Comments from the Winema National Forest (Klamath Falls plan)

A. The Road Management direction specified in the Klamath Falls Resource Area Plan/EIS is consistent with Road Management and Road Access direction for the Winema National Forest.

B. Page 2-18 and 19 (Rights-of-Way Corridors): There are a couple of conflicts regarding corridor designations:

The BLM recognizes a 2,000 foot corridor, where County roads cross BLM lands, for future facility placement. The Winema Forest Plan did not designate County roads as Corridors. Where the Winema Plan designates corridors, corridors correspond to the existing right-of-way/easement widths. There is no continuity of corridors between the two plans.

2) Definitions of "Exclusion" and "Avoidance" are different than what were used in the Winema Plan. In the Winema Plan Research Natural Areas and Scenic Areas are Avoidance areas, not Exclusion Areas; underground utilities may be appropriate in Scenic Areas but would not be permitted if the area was an Exclusion Area.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Portland Field Station
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266

L-0901

December 21, 1992

Memorandum

To: Klamath Falls Resource Area Manager, Bureau of Land Management, Klamath Falls, Oregon

From: Acting Field Supervisor, Oregon Field Office, Portland, Oregon Patrick D. Wright

Subject: Draft Resource Management Plan (RMP) and Environmental Impact Statement (EIS) for the Klamath Falls Resource Area (Area)

The Fish and Wildlife Service (Service) has reviewed the subject document and offers the following comments for your consideration in preparing the final RMP and EIS.

GENERAL COMMENTS

We commend the Klamath Falls staff for compiling and organizing an array of information into one document. Further, we strongly support the Bureau of Land Management's (BLM) desire to manage their lands for biodiversity from an ecosystem perspective. However, we strongly believe the management alternatives presented, including the preferred alternative (PA), would fail to provide the habitat components needed to achieve truly viable populations of all native flora and fauna and reestablish the area's biodiversity.

We are particularly concerned that in the short term too much of the area's remaining old-growth and mature forest would be removed to maintain viable populations of old-growth-dependent wildlife species.

Given the short supply of old-growth forest systems in western Oregon and the critical status of some wildlife species dependent on or closely associated with old growth ecosystems, the Service recommends that BLM maintain existing old growth, where possible, for the life of the plan. This would allow greater options for management of old-growth-dependent species in future planning efforts.

We are equally concerned that under all alternatives except E, riparian habitat on most 1st, 2nd, and even some 3rd order streams would not be adequately protected to maintain, let alone improve, water quality in the area's watersheds or provide adequate habitat to maintain truly viable populations of riparian-dependent wildlife species. Accordingly, the Service recommends that the PA be strengthened by incorporating standards that will protect all riparian habitat areas, including those adjacent to intermittent streams, with adequate buffers to not only prevent any further degradation of water quality, but to improve water quality on all stream reaches administered by BLM. Within these Riparian Management Areas (RMA's) no timber harvest should be planned as part of the sustained yield timber management program, but some timber harvest could occur to achieve other resource management objectives.

The Service found the subject document difficult to read and understand. Too often the information presented for one alternative was not presented for another alternative in a manner that allowed the two to be easily compared. Often it was also difficult, and sometimes impossible, to determine specific impacts of the various alternatives.

In view of the above, we strongly suggest the format and content of the final document be modified to clearly state the impacts of each alternative in a manner that allows the alternative to be easily understood and readily compared. We believe the Salem District document was particularly well written, easy to understand, and would serve as a good model to follow in preparing the final document for the Klamath Falls Resource Area.

SPECIFIC COMMENTS

Page S-3, Table S-2, Water Quality. It is difficult to understand how all of the alternatives would have the same impacts on the water quality of the area's "analytical watersheds" considering that 1) timber harvest on the West side varies by up to 1,800 percent, depending upon the alternatives being compared and 2) the differences in Riparian Management Areas between the alternatives (Table S-1, S-13). The final document should clearly explain why the impacts are identical for all alternatives considering their magnitude of difference in timber harvest and riparian protection.

Page S-9, Other Wildlife (including Fish) Habitat. The PA would be strengthened if the 100-foot buffer for "unique habitats" was a minimum as opposed to an average, and the management standard provided for a case-by-case analysis and, if necessary, an expansion of the buffer to maintain the integrity of the habitat and its use by fish and wildlife.

Page S-13, Table S-1. We believe the 40-foot buffer identified for 6th order streams under the PA is a typographical error and should read 240 feet. The text provided for "water quality protection" under the PA in Table S-1 should be expanded to include the language concerning ecological condition contained in the text for Alternative E.

Page S-19, Table S-1, Wet meadows buffer width. The PA would be strengthened if the 150-foot buffer width was a minimum and could be expanded on a case-by-case basis, if necessary, to protect meadows and maximize their use by wildlife.

Page 2-11, Brush and Hardwood Conversion. The final document should clearly describe the impacts of conversion to fish and wildlife and explain how it would affect biodiversity and ecosystem maintenance.

Page 2-13, General Fish and Wildlife Habitat. This discussion should be expanded to indicate that although the percentage of optimum population potential for cavity nesters in timber harvest units will vary by alternative, an adequate number of snags will be retained to provide for some minimum percentage of optimal population potential. We would suggest that minimum should be 60 percent. A brief discussion as to how the data collected for reptiles and amphibians will be used should also be included.

Page 2-63, Water Quality of Riparian Zones. Shifting from stream order to stream class, even after reading Appendix 2-B, makes this discussion of buffer width difficult to understand. It would be improved if it clearly and concisely described where and to what extent buffers will be used under the PA. Further, the Service strongly suggests the PA standards for riparian buffers be strengthened to include Resource Management Areas (RMA's) that will protect all riparian habitat on all streams, including intermittent streams, to protect and improve water quality and fish and/or wildlife habitat on all stream reaches managed by BLM. Within these RMA's no timber harvest should be planned as part of the sustained yield timber management program, although timber harvest could occur to achieve other biodiversity and ecosystem objectives (See our comments for page 2-79, Table 2-1.

Page 2-65, Harvest of Juniper Woodlands. The final document should be expanded to include a detailed discussion of the anticipated impacts associated with the conversion of juniper woodlands.

Page 2-79, Table 2-1. From the table, it appears that only 3.6 percent (7,642 acres) of the planning area is riparian or wetland habitat. Its protection would not appear to be a major commitment of land, especially when the attributes of these areas are considered. In view of the above, the Service strongly recommends the PA or selected alternatives include standards to protect all riparian and wetland habitats as proposed under Alternative E, with the exception that selected timber harvest - not included in the ASQ - and grazing be considered to achieve biodiversity goals and ecosystem function.

Further, this table indicates that under Alternative D more acres would be covered by RMA's on the East side than under Alternative E. The final document should explain this, considering that Alternative E provides for equal or wider buffer widths.

Page 2-80, Table 2-1, Livestock Utilization. The final PA or selected alternative should be expanded to include the standard for grazing that is incorporated into Alternative E, and reads as follows: "Protect all riparian ecosystems either through the use of intensive grazing management or by excluding livestock."

Page 2-81, Table 2-1, Old Growth and Mature Habitat. We suggest this table be expanded to identify both the amount of old growth and mature stands that presently exist for both the West and East sides.

Pages 2-98 through 2-109, Tables 2-2 and 2-3. In the final document these tables should be expanded to include a brief description of the buffer width necessary to protect each species being evaluated. That would enable the reviewer to better understand to what degree each alternative would meet each species' requirements.

The Service believes the final PA or selected alternative should include a detailed discussion of how reptiles and amphibians would be impacted and include management actions which will adequately provide for the maintenance of truly viable populations of all reptiles and amphibians native to the planning area.

Page 2-110, Buffer of Special Habitats. The final PA or selected alternative should include adequate upland buffers around the wetland habitats to allow for the optimum use of these areas by wildlife that require significant uplands in conjunction with wetlands for nesting, denning, etc.

Page 3-27, Table 3-11, Existing Older Forest Blocks. This table should be modified to clearly show existing stands for the East side as presented for the West side. (The east side information, as presented, does not clearly describe "unit acres" or "Outside" the SYU.)

Pages 3-36 and 3-48, Riparian Zones. The attributes of riparian areas described under this section provides excellent justification for protecting all riparian habitat (7,642 acres or only 3.6 percent of the planning area) on all streams, including intermittent as well as perennial. The Service suggest the selected Alternative include protection of all riparian habitat.

Page 4-17, Other Effects, 1st paragraph. In our opinion a reduction in acres affected by timber harvest may not necessarily equate with a trend toward improved watershed conditions. Although reduced, the level of timber harvest could still be sufficient to continue to adversely impact watershed condition, although perhaps at a slower rate.

The final document should clarify that the benefits to upland watershed and riparian conditions attributed to Alternatives C, D, E, and PA would not extend to most 1st and 2nd order streams (except under Alternative E) which probably comprise a significant amount, if not most, of the upland watershed area.

Page 4-18, 2nd paragraph. This paragraph states that reduced livestock grazing in riparian zones under Alternatives C, D, E, and PA would help "offset" potential cumulative sediment and temperature effects. It would be more accurate to state it could reduce these effects as opposed to offset these effects.

Page 4-21, Mature and Old Growth Seral Stages. This discussion should be expanded in the final document to clearly state 1) what presently exists (acres, block size, etc.) on the planning area and 2) what will remain both short and long-term under each alternative.

Page 4-22, Ecosystem Diversity, 1st paragraph. This discussion should be expanded to explain why "brushfield," shrub, and juniper reductions are unavoidable. The Service suggests that the PA could be modified to include management guidelines that would provide for the retention of some or all of these habitat types.

Page 4-22, 2nd paragraph. The Service suggests the final PA or selected alternative include management guidelines to provide buffers that will restore and protect the microclimates and energy flows described. On page 4-32 the necessary buffer width required is stated to be approximately 400 feet.

Page 4-37, Mature and Old Growth Forest Habitat. The Service supports the retention of 9,630 acres of existing older forest. This represents only 4.5 percent of the planning area, and yet is extremely important in maintaining biological diversity and ecosystem function over the short-term. The final PA or selected alternative should include the retention of all existing old growth to insure adequate habitat is provided during the next few decades to provide truly viable populations of old-growth-dependent wildlife.

THREATENED AND ENDANGERED SPECIES

GENERAL COMMENTS

The following comments are provided as part of informal consultation (1-7-93-I- 100) pursuant to Section 7 of the Endangered Species Act of 1973, as amended. The Bureau has requested informal consultation on the Resource Management Plans. The Service will be providing an informal consultation document by January 15, 1993. The Service anticipates that formal consultation will be initiated by the Bureau once an alternative is selected. It is our understanding that a biological assessment (BA) will be forthcoming on the listed species prior to initiation of formal consultation. We recommend that the BA include an evaluation of effects to proposed species, and Category 1 candidate species.

The federal status of several species are incorrectly noted in the Draft EIS. The changes which are needed are noted under Specific Comments. The final document needs to reflect the recommended corrections and reevaluate effects of the alternatives for each species with an incorrect federal status.

The document states that Recovery Plans for the bald eagle and peregrine falcon are being implemented on BLM lands. Development of site-specific management plans have been recommended in the bald eagle Recovery Plan and are equally useful in the management of peregrine falcons. The biological assessment should clarify whether site-specific management plans will be developed for these species and when. Because management on BLM lands alone may not be sufficient to reduce threats to Federally listed species such as the bald eagle and peregrine falcon, the Service encourages the development of site-specific management plans in coordination and cooperation with adjacent private landowners and the Oregon Department of Fish and Wildlife wherever practicable.

The Draft states that bald eagles may be negatively affected by road management, recreation development, and off-road vehicles and that peregrine falcons may be negatively affected by road management, recreation development, mineral exploration and development, and off-road vehicles. The Service also perceives that timber harvest activities, grazing allotments, and increased recreation pressure and/or development have the potential to adversely affect listed and proposed species. The biological assessment should indicate what measures, i.e. conduct inventories, development of buffers or site-specific management plans, consultation with the Service, etc., will be implemented to assure that these actions would not adversely affect listed species.

Monitoring of the species status on BLM lands will be important to provide early warning of adverse change. The biological assessment should indicate how listed, proposed, and candidate species status will be monitored and funded, the frequency of monitoring, and purpose of monitoring, e.g. occupancy, productivity, and/or specific threats.

SPECIFIC COMMENTS

Page 2-96. Table 2-2, Bald eagle. The document states that management activity would be restricted within 1/4 mile of nests from January 1 to August

15. Activities during the breeding season within line-of-sight, or occurring within 1 mile should be carefully reviewed for effects to bald eagle since there may be particular aspects of topography, local environmental conditions, or the frequency, magnitude, and duration of the potentially disturbing activity which would substantiate a need for an increased buffer distance. A 1/4 mile buffer during the breeding season may not be adequate to avoid effects from various activities, such as blasting, low level aerial flight, and timber harvest. The pacific Bald Eagle Recovery Plan advises that activities should also be regulated up to 800 ;meters form nests and roosts where eagles have line-of-sight vision. Management direction should be extended to cover roosts wherever they are known to occur.

The document states that a buffer of up to 30 acres around known and future nest sites are to be provided under all alternatives. This management direction does not provide flexibility to consider aspects such as stand characteristics, known individual tolerances of birds, prevalent weather patterns, location of key use areas, and flight paths. This measure may not be adequate to secure a site from disturbance or provide for long-term availability of nest trees in all cases. The Recovery Plan and Implementation Plan for the bald eagle stress the need for site specific plans. The Service suggest the selected alternative incorporate these factors into its criteria to better protect the bald eagle.

Page 3-49 Special Status Species Habitats, Plants: Statement that there are no proposed federally listed species needs to be corrected. *Astragalus applegatei* was proposed on November 26, 1991.

Page 3-50 Table 3-19. The table should be corrected to reflect the correct federal status of *Astragalus applegatei*.

Page 3-56 Table 3-20: Spotted frog, northern goshawk, and Pacific fisher are Federal candidate species (category 2).

Page 4-58 Effects on Special Status Species: Effects to species such as spotted frog, northern goshawk, Pacific fisher, and *Astragalus applegatei*, should be reevaluated based upon the corrections in federal status noted above. Statements regarding effects to federally listed, proposed, candidate, and assessment species should be rechecked based upon correct species status.

SPOTTED OWLS

GENERAL COMMENTS

In general, the draft RMP appears similar to the draft Recovery Plan for the Northern Spotted Owl (draft Recovery Plan), at least in terms of results. The Klamath Falls Resource Area does not contain any DCA in the draft Recovery Plan and is intended to be managed for dispersal condition in the matrix.

The RMP does acknowledge the increased risk to spotted owl caused by the uncertainty associated with the human management of forests to speed the development of, or maintain, older-forest characteristics and the uncertainty that silvicultural systems will be successful in recreating suitable habitat. This risk should be evaluated and discussed. Again, standards or guidelines should be provided within the RMP to allow evaluation of the risk and the impacts to the recovery of the spotted owl.

Large scale salvage also carries uncertainty for the future condition of habitat, as does prescribed burning. Given the lack of knowledge concerning the development of forests following catastrophic events, it is difficult to determine the appropriate level of stand legacy necessary to mimic natural recovery or speed development of natural condition. Therefore, large-scale salvage increases the uncertainty and risk of development of future old growth characteristics. The RMP should include an evaluation of the potential impact of salvage on future habitat condition. Proposals for prescribed burning should be individually evaluated relative to risks from the burn and benefits of the burn.

Dispersal between the large deferred OGEAs and between provinces is critical to maintaining distribution and viability of spotted owls. Very little information is presented in the RMP relative to the current dispersal condition or impacts of the preferred alternative on dispersal condition. These impacts should be evaluated and presented.

Relative to the Klamath Falls Resource Area, dispersal condition is of particular concern in the Ashland/I5 Area of Concern which links the Cascades and Klamath provinces. Without adequate dispersal across the area of concern, risk of isolation of the Klamath and Western Cascades province is increased. A portion of this area of concern lies within the Klamath Falls Resource Area, yet the RMP contains no information on the dispersal condition in this area or evaluation of the impacts of the preferred alternative on this area of concern. This area is not identified for any special management relative to spotted owls.

All present and future core areas of spotted owl pairs or resident singles should be withdrawn from timber harvest. These core areas, coupled with the uneven-age/multiple canopy management prescriptions in this area provide an excellent potential to provide for spotted owls within a managed forest.

The document should contain an assessment of the viability of the spotted owl under the preferred alternative. The assessment should evaluate the viability of the spotted owl in the short term, lowest point in the habitat development, and long term. Improved habitat amounts and conditions 100 years in the future are of little value if the spotted owl populations are extirpated before habitat recovery. While the document included mention of risk in several areas, it contains no evaluation of spotted owl viability. The McKelvey model is used only to compare the alternatives, not evaluate viability.

The monitoring section of this document should be expanded and increased to include specific proposals with thresholds, trigger points, and courses of action. With this RMP, the BLM is attempting to manage forests in a manner different from all previous efforts. As a result, management prescriptions include numerous theoretical components that are as yet untested. Many of these prescriptions have the potential to affect listed species, particularly if the prescription fails to produce the desired condition. Therefore, the risk of failure carries serious consequences. The BLM discusses the concept of adaptive management in the RMP, but fails to carry that discussion to specific monitoring. Given the consequences of failure, monitoring plans should have specific thresholds and trigger points, and specified courses of action if thresholds are exceeded. In addition, experimental and theoretical procedures should not be implemented unless monitoring is included. If monitoring is not funded, harvest should not proceed.

The final rule designating critical habitat for the northern spotted owl (final rule) was published on January 15, 1992. The RMP should contain a discussion and evaluation of the impacts of the RMP on designated spotted owl critical habitat.

SPECIFIC COMMENTS

Page S-7. Column 1. Paragraph 4. Older forest habitat is maintained in the west portion of the Resource Area through a system of 80 to 100 acre protected habitat area (PHA) blocks. Several of these PHAs correspond to spotted owl core areas. The RMP should describe the relationship of the PHAs to spotted owl core areas.

The maintenance of 80 to 100 acre PHAs and 1/4 mile buffers in old growth characteristics will potentially provide a solid core area for spotted owls occupying these areas.

Page S-9. Column 5. Northern Spotted Owl. This paragraph indicates that all spotted owl nest sites would be "protected" by an 80 to 100 acre buffer. The RMP should provide the standards under which these sites will be protected. Core areas of both pairs or resident singles should be protected regardless of the nesting status. Eighty acres of suitable habitat, not just acres, should be protected around each core area through withdrawal, not deferral. Core areas should be maintained regardless of the occupancy of the site. All new core areas should also be protected. This will provide opportunities to manage spotted owls in the landscape. These core areas should be protected in all land allocation. Management, particularly regeneration harvest, should not occur within these core areas.

Page S-9. Column 2. Paragraph 2. The discussion of the discrepancy between the population model's projection of current population and the observed population should include potential problems with the model. The magnitude of the discrepancy is unlikely to be fully attributable to "packing".

Page 2-12. Column 2. Paragraph 3. All activities that might potentially disturb nesting spotted owls should be prohibited within 1/4 mile of the core area from March 1 to September 30 of each year. This includes, but is not limited to, timber harvest, felling, road building, yarding, and prescribed fire.

Page 2-12. Column 2. The Klamath Falls Resource Area contains designated spotted owl critical habitat. The impacts of the preferred alternative on designated critical habitat should be addressed.

Page 2-64. Column 1. Paragraph 5. The RMP should describe how the uneven-age/multiple canopy management harvest prescriptions would provide for the migration and dispersal of organisms between the Forest Service Designated Conservation Areas, and which organisms are included in this statement.

Page 4-60. Column 1. Paragraph 2. Rather than assume that density management in the preferred alternative would not negatively affect attainment or retention of suitable habitat condition, the RMP should contain an assessment of the risk of negatively affecting suitable habitat, in light of the experimental nature of the density management prescriptions.

Page 4-60 and 61. The final document should provide information on the quality and distribution of suitable habitat beyond simply stating that habitat will initially decline, then increase after 50 years over current available. Replacement of nesting quality habitat with forests meeting minimal foraging quality may still result in a reduction in the viability of spotted owls. This problem is intensified if a substantial portion of this habitat is scattered, and further exacerbated by the checkerboard ownership pattern common to BLM lands. The final should also provide information on the extent to which this development of habitat is dependent on the ability to create or speed the development of suitable habitat through silvicultural practices, an as yet unproven assumption.

APPENDICES

Page 2-137. The BLM should provide its own monitoring program for spotted owls in the event that a recovery plan is not adopted immediately. Monitoring is a critical part of any plan, but carries even greater weight in a plan that incorporates numerous untested procedures that potentially impact listed species. To be effective any monitoring plan must include thresholds that will trigger re-evaluation and explicit courses of action if thresholds are exceeded. Monitoring plans should be developed prior to the adoption of the RMP to allow adequate evaluation of impacts of the monitoring to all aspects of the RMP. All actions should be tied to adequate monitoring. If monitoring is not funded, actions affecting the listed species should not proceed.

LOST RIVER AND SHORTNOSE SUCKER

GENERAL COMMENTS

The discussion of the distribution of the Lost River and shortnose suckers is out of date. The Final RMP should reflect the current distribution of these species, and should include a thorough re-analysis of the effects of Preferred Alternative Management guidelines on these species in all the areas.

Statements throughout the draft RMP suggest that the PA will provide positive effects to the listed suckers, while in fact they would not. This appears to be based on comparison with the current grazing levels. While it is true that a reduction in AUM's might very likely reduce grazing caused impacts to listed fishes (via riparian and water quality impacts), the PA level of grazing pressure still represents a negative impact to these species. The RMP should compare the effects of grazing on listed suckers to the absence of grazing, not current management. Even though riparian recovery rates under the PA are greater than under the NA, recovery rates under no grazing at all are faster still. It is the maximum rate of recovery of riparian areas that should be used to determine the effect to listed species.

The discussion of riparian areas and the effect of their conditions on fishes in the RMP is limited, by and large, to the effects on gamefishes. While these fishes may be of concern to the general fishing public, the BLM has responsibility under the Endangered Species Act to the listed fishes that are found both on BLM lands and in stream systems downstream of these lands that are potentially affected by the management programs on BLM land. In some cases, managing for non-native gamefishes (such as bass, catfish, and brown trout) may be in direct conflict with providing suitable habitats to the listed suckers. The RMP should discuss the degree to which fisheries management effort will be aimed at the listed fishes as opposed to gamefishes and resolve any conflicts between gamefish management and listed species.

The RMP should address the link between riparian condition and the needs of the listed suckers. For example, Table S-1 (page S-13) "Water quality protection", fails to discuss either listed sucker. On page S-1B, "Additional conservation standards", the RMP states that the BLM will "[m]anage habitats of federal candidate, state listed, and Bureau sensitive species on all BLM administered lands", but fails to mention T&E species, or how BLM will manage these habitats. Table 2-2 should contain a more detailed discussion of how riparian crown cover will be managed for the listed suckers.

Table 2-5 (page 2-111) "Proposed Fish Habitat Enhancement Projects", should include habitat improvement projects for listed species. The Klamath Falls Resource Area should develop and implement a Lost River and shortnose sucker monitoring and recovery program for habitats on BLM lands.

The role of riparian management, and thus grazing management, in the protection and enhancement of listed sucker populations cannot be overstated. The management of riparian areas under grazing plans as listed in the RMP will very likely decrease the amount and quality of stream habitats for these listed species, possibly continuing a downward population decline of these species. The RMP should include immediate improvements in riparian condition and associated water quality in all drainages that potentially provide habitat to the suckers, not just in those areas where sucker populations are known to exist, or the limited subset of known populations mentioned in the RMP. The linear (downstream) effects of degraded water quality on suckers and sucker habitats should be addressed.

SPECIFIC COMMENTS

Page S-3. Table S-2 should list values under the row heading "Riparian Trend (200 Years)".

Page 2-5. Riparian Zones. The RMP states that riparian zones will be managed to provide bank stability for 90% of the banks. It is not clear if this represents a percentage of linear distance, or of area within a riparian zone. The difference between these two could be significant in the case of a laterally cutting bank failure.

Page 2-6. The RMP states that "Monitoring of riparian zone conditions would occur periodically..." The term periodically should be quantified.

The RMP states that "[e]xisting snags, riparian vegetation, and woody debris in riparian zones would not be removed **or** managed to maintain or enhance stream channel and bank structure" (Emphasis added). The (bolded) "or" should be replaced with "but would instead be". If the sentence reads as intended, we question the wisdom of such an activity.

The RMP also states that "[a]n interpretive program intensive multiple use management systems currently being used to bring about improvements in riparian conditions" (sic). The intent of this sentence is unclear.

Page 2-12 through 2-14. The RMP refers to planned surveys for both non-special status species and some special status species, yet there is no mention of plans to survey for the listed suckers. The Final RMP should outline and commit to a listed sucker habitat, distribution, and status survey for the suckers on BLM lands.

Page 2-24. The RMP mentions a new grazing allotment that will be developed for the Klamath River Canyon. This change will result in a marked increase in the control of grazing use in the canyon, and will likely improve riparian and fish habitats over the long term.

Page 2-63. The RMP refers to setting specific utilization levels within selected riparian habitats that allow for the production of a moderate sustained yield of forage. The reasons for selecting certain areas should be provided in the RMP. These criteria should include the presence or downstream existence of T&E listed fishes. To ensure adequate riparian condition, these utilization levels should be used as "kick out" points beyond which no use would be allowed. Fencing to exclude livestock use is mentioned in the RMP, but the intent of this fencing is not clear. Fencing should be used to protect listed species, as appropriate.

Page 2-100, in Table 2-2. The RMP is not clear as to what the buffer areas will provide for management. The RMP should clearly indicate whether these are areas within which no logging activity will occur or areas where no possible degradative activity will be allowed (which would include grazing). The term "buffer" should be defined.

Page 3-16, Map 3-3. The Gerber and Miller Creek watershed area appears to have large areas of moderate erosion condition class lands. Given the presence of endangered suckers in this area, riparian and watershed condition improvement in this area should be the highest priority. The Service feels that the grazing management as discussed in the RMP for this area does not adequately address, either in level of detail or in management direction, the needs of these listed fishes.

Page 3-20, Table 3-8. Several creeks that provide habitat for, or that are upstream of (and thus will affect) listed sucker habitats, are listed as having water quality problems. These conditions are potentially very damaging to sucker populations, and should be remedied as soon as possible. The RMP does not appear to rate these streams as having any greater priority for management to promote water quality than other streams, though it should.

Page 3-49. The RMP states that 150 miles of stream inventories conducted by the Klamath Falls Resource Area fish biologist and ODFW examined both habitat condition and population status for several fishes, including the listed suckers. The table lists that the population trend for the two listed fishes on the east side of the RA is downward, but at a medium level. The final document should provide details on this evaluation, including the methods used to generate the data. If the BLM have population estimates for the Lost River and shortnose sucker on BLM ground, this information should be included in the RMP. It appears from the table that management efforts to protect and enhance the sucker populations lag behind those of unlisted gamefishes, as the suckers represent 66% of the fishes listed in the table with downward trending populations.

Page 3-54, Map 3-7. The map contains inaccurate distribution information. For example, based on discussions with BLM personnel, shortnose suckers are known to occur in Gerber reservoir and in Miller Creek downstream of Gerber reservoir, yet the map only indicates that Klamath Largescale suckers inhabit the lake. The map should be re-drawn with updated distribution data that clearly indicate the best known current distribution of each species. Subsequently, the analyses that were done on all actions in watersheds that provide habitat for, or are upstream of, listed suckers should be re-done to determine effects to the suckers. If these actions are found to possibly affect the listed suckers, the BLM should enter into consultation with the Service.

The grouping of Lost River sucker, shortnose sucker, western pond turtle and bald eagle into a single legend item on the map suggests that these species are somehow grouped in habitat use, or through some behavioral inter-relationship. Map 3-7 should be redrawn to indicate each species individually.

Page 3-58. The discussion of the biology and distribution of the listed suckers is vastly inadequate. Based on the BLM's involvement in the Klamath Basin Research Coordination Meetings over the last year the Final RMP should be expanded to include all available information and a thorough analysis of the effects of the Preferred Alternative Management on these species in light of their range and biology of the species.

Page 3-102, Livestock Grazing. In the discussion of current grazing management in the Gerber Block, the RMP states that "[s]hort-duration, high intensity grazing systems specifically designed to improve riparian and wetland resources have been implemented to varying degrees on the I allotments". The RMP should explain why these types of management plans have been implemented on I allotments in the Gerber Block alone, and not throughout the Klamath Falls Resource Area where there are I allotments. Similar programs should be implemented with the known distribution of listed suckers in mind.

Page 3-103. The RMP states that 15 management categories in conflict with existing grazing practices have been identified for the Klamath Falls Resource Area, yet only nine are listed. The remaining 6 should be listed and should include T&E Species Management. The RMP should demonstrate an awareness of the potential impacts to T&E Species by grazing management practices.

Page 3-104, Map 3-17. The grazing allotments in the Gerber Block represent a significant BLM ownership, and therefore management control, over a large percentage of a drainage basin. This provides an excellent opportunity to meet BLM's duties under the Act to conserve listed species by allowing management changes to have effects to most of a large drainage important to listed species.

Page 4-77. The RMP discusses Environmental Consequences to listed suckers, Klamath Largescale sucker, and western pond turtle. In the text of this section, the RMP states "[r]esource allocations and management activities that could affect these species include: grazing management...riparian buffers...". The discussion in the text on effects due to grazing is rather ambiguous, and could represent negative effects or positive effects, yet only positive effects due to grazing management are listed in Table 4-31 which summarizes this section. In general, grazing does NOT provide a beneficial effect to streams, riparian corridors, or fishes if, in the absence of that grazing, the area would recover faster. The baseline for T&E Species management is not how habitat conditions would be under the "old" plan, but rather, how they would be under the fastest possible recovery conditions. In the case of grazing, the fastest possible recovery conditions would occur under no grazing at all. Therefore, the effects of allocations on listed suckers in Table 4-31 should be negative, not positive.

The RMP also states that "[i]n the short term, most of these species would continue to decline until water quality conditions and streamside riparian vegetation began to recover and contribute stability to these populations." This sentence immediately follows the statement that "[m]ost allocations would have a **positive** effect in alternatives C,D,E, and PA". The RMP should explain how the RMP results in a "**positive**" effect relative to a continued decline of a Federally listed species.

Map 3-3 clearly indicates that much of the watershed in the Gerber Block, for example, is in moderate erosion class condition, and so would be better able to recover in the absence of grazing. While we are not suggesting that BLM totally eliminate grazing in the Gerber Block or other drainages containing listed suckers, the Final RMP should more accurately reflect the current understanding of the effects of historic poor grazing management on listed fishes. While it is unfortunate that past management practices may hinder current riparian recovery efforts, the needs of the listed species should be met first, with all efforts aimed at preventing a continued decline.

The RMP states that "[t]he majority of land management actions that affect water quality occur on non-BLM, primarily private and other federal, lands." This statement appears to be in direct conflict with the data on water quality presented on page 3-20, Table 3-8, titled "Results of the 1988 DEQ Oregon Statewide Assessment of Nonpoint **Sources** of Water Pollution on BLM-administered Lands" (emphasis added). This should be clarified or corrected.

Appendix 2-H, Livestock Grazing Allotments. Allotments 851, 876, 879, 882, 883, 884, 885, 886, 887, 888, 889, 890, 893 all appear to be in the range of, or within a drainage inhabited by, the listed suckers. Of these, only 3 cite Special status species and/or habitat exists within the allotment. The Final RMP should acknowledge impacts of management of these allotments on listed species.

Identified Resources Conflicts/Concerns are listed as follows: 5 cite Detrimental use - distribution problems occur in the allotment; 3 cite Range condition (livestock forage condition) unsatisfactory; 8 cite No grazing management system established in the allotment; 4 cite Physiological needs of key forage species are not being met; 4 cite Wetlands habitat in less than satisfactory condition; 10 cite Riparian or aquatic habitat is in less than good habitat condition; 8 cite Water quality may not currently meet DEQ water quality standards; and 1 cites Active erosion. This clearly documents that past grazing management practices have failed to provide for the needs of streams, riparian areas, and, most importantly, the listed species that depend on these resources. While the Management Objectives optimistically seek to solve these problems and conflicts, the Service questions whether a 5% reduction in AUM's in the Klamath Falls Resource Area will accomplish such goals.

SUMMARY COMMENTS

The Service supports BLM's desire to manage their lands for biodiversity from and ecosystem perspective. To achieve that goal we recommend the selected

L0901

alternative include the retention of all existing old growth and mature forest habitat (4.5 % of the planning area) and provide for the protection and enhancement of riparian habitat on all streams (3.6% the planning area).

Relative to the threatened northern spotted owl, the Service is concerned about the impacts of proposed management activities to dispersal between provinces and the lack of a viability assessment in light of the continuing loss of habitat in the intermediate-term. The Service recommends that the preferred alternative include minimum thresholds for dispersal condition on forested lands. Given the untested nature of many of the proposed silvicultural prescriptions, the Service recommends that a detailed and sensitive monitoring plan be developed and required prior to implementation of the plan.

The information in the RMP relative to the Lost River and shortnose suckers is inaccurate and the analysis of impacts of the plan inadequate to fully evaluate the effect of the RMP on listed suckers. The impacts of grazing management to the listed suckers should be evaluated relative to the absence of grazing, not the current grazing program. More emphasis should be placed on management for these listed species in the RMP.

The Service also suggest the final document include a concise description of BLM's long term goal for the planning area as a whole is; manage for biodiversity to maintain healthy and truly viable population of all native flora and fauna and provide for a sustained yield of forest products, etc., etc. The final should also identify short-term management objectives that can be measured and evaluated to determine whether or not the long-term goal is being adequately pursued.

PW/mm/KFRMA (hard)y

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BLM · [illegible] DISTRICT OFFI
RECEIVED:
DEC 21 '92

December 18, 1992

Ms. Judy Nelson, District Manager
Bureau of Land Management
1000 Ninth Street S.
Lakeview, OR 97630

Dear Judy:

Enclosed you will find the State of Oregon's Final Coordinated Response to the Klamath Falls Resource Area's draft Resource Management Plan and Environmental Impact Statement. We have also attached copies of six position papers, state agencies' final comments and the Oregon State University Report. This response represents the State's final review of concerns that eleven state agencies, the public and interest groups, and Oregon State University have expressed to us over the last several months on BLM's draft plans.

I encourage your District staff to feel free to contact the Governor's Forest Planning Team to gain a full understanding of specific concerns and recommendations that we have outlined in our response.

I thank you and your staff for the field trips and discussions afforded the Governor's Forest Planning Team over the last year. We look forward to continuing this cooperation with your District. If you have any question about the State's final response, don't hesitate to call.

Sincerely,

Anne W Squier

Anne Squier
Senior Policy Advisor for
Natural Resources

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THE STATE OF OREGON'S FINAL COORDINATED RESPONSE

TO THE

BUREAU OF LAND MANAGEMENT'S

DRAFT RESOURCE MANAGEMENT PLANS

AND

DRAFT ENVIRONMENTAL IMPACT STATEMENTS

Governor's Forest Planning Team December 1992

L0925

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY....i

I. INTRODUCTION....1

II. MAJOR ISSUES....2

A. Ecosystem Management....4
1. Concepts and Principles....4
2. Goals of Ecosystem Management....5
3. Consistency with Legal Mandates and Authority....5
4. State's Recommendations....6
5. Summary....8

B. Land Use....8
1. Rural Interface....8
2. Federal Consistency....10
3. Land Tenure....11
4. Navigability....12

C. Fish and Watershed Management....12
1. Fish....13
2. Water Quality and Quantity....14
3. Water Quantity....16
4. Watershed Management....16
5. Riparian Area Management....19
6. Wetlands....22
7. Summary....22

D. Air Quality....23
1. PM10 Nonattainment Areas....23
2. Prevention of Significant Deterioration....23
3. Visibility Protection....24
4. Summary....24

E. Tourism and Recreation....24
1. Recreational Tourism....25
2. Dispersed Recreational Demand....25
3. Wilderness....26
4. Trails....27
5. Developed Recreation Sites....27
6. Wild and Scenic Rivers....27
7. Off-Road Vehicles....29
8. Scenic Highways....30
9. Technical Issues....31

F. Timber Management....................................31

1. Forest Land Management..........................32
2. Land Suitability................................34
3. Growth and Yield Assumptions....................34
4. Forest Health...................................35
5. Timber Supply...................................36

G. Wildlife Management..................................37

1. Deer and Elk Habitat............................37
2. Snags and Dead-and-Downed Wood..................39
3. Sensitive, Threatened and Endangered Species...........39

H. Old Growth...42

I. Livestock Management.................................43

J. Minerals and Energy..................................46

K. Socio-Economic.......................................47

1. Socio-Economic Conditions.......................49
2. Community Stability.............................49
3. Social Impacts..................................50
4. Recreation/Tourism Industry.....................50
5. Monitoring......................................50
6. Summary...50

L. Road Management......................................51

M. Special Plant and Tree Species.......................52

1. Special Status Plant Species....................52
2. Yew Bark..53

N. Tribal Concerns......................................53

O. Standards and Monitoring.............................54

P. Budgets..55

III. DRAFT PLANS ORGANIZATION..............................56

IV. FINAL COMMENTS..57

EXECUTIVE SUMMARY

The Governor's Forest Planning Team has completed the Final Coordinated Response to the Bureau of Land Management's draft management plans for the Eugene, Salem, Medford, Coos Bay, Roseburg Districts, and the Klamath Falls Resource Area. Preparation of this coordinated response is part of Governor Roberts' commitment to be aggressively involved in federal forest planning and working within the spirit of cooperation outlined in the Memorandum of Understanding signed between the State, Bureau of Land Management (BLM) and the United States Forest Service.

Key issues addressed in the State's Final Coordinated Response to the six BLM plans are summarized in the following sections.

Ecosystem Management. The State endorses BLM's overall ecosystem management approach by using biological diversity to manage their lands. While biological diversity will require long-term experimentation, research and intensive evaluation and monitoring, the State believes that it will create over time a more ecologically sustainable, productive, healthy, and resilient natural ecosystem. The State believes that people and communities are key elements that must be considered when implementing ecosystem management.

Land Use. Land use conflicts between BLM and rural interface residents have increased over the years. The State recommends that BLM become more active in local land use planning. This means BLM should actively participate in Oregon's statewide land use planning program by coordinating its efforts with various state agencies and local governments.

Fish and Watershed Management. The State supports BLM's strategy to manage and monitor by analytical watersheds. Water quality and quantity, fish and wildlife habitat, and wetlands should be enhanced, maintained if in good condition and restored where conditions have been identified as declining. Sensitive fish stocks must be protected on BLM-administered lands. BLM should protect riparian areas and monitor conditions over time. Cooperation between landowners is essential within multiple ownership watersheds to achieve the desired conditions.

Air Quality. BLM plans should more specifically address how the proposed increase in use of prescribed burning will meet state and federal air quality standards. Continued cooperation between the State and BLM regarding air quality is encouraged.

Tourism and Recreation. The State recommends that BLM expand recreational opportunities on its lands. This would include increasing/expanding developed recreation sites, increasing dispersed recreational opportunities, building additional trails, and protecting scenic quality along state/federal highways and Wild and Scenic Rivers.

Timber Management. While the State supports BLM's new biological diversity emphasis, we question predicted harvest levels anticipated from various land allocations. In particular, growth and yield assumptions may not meet the timber volume expected from lands within the timber base. Increased dependence upon intensive management practices to produce the predicted allowable sales quantities must be accompanied by stable funds for implementation and monitoring. Forest health should be more adequately addressed in the final plans.

Wildlife Management. BLM needs to more explicitly explain how they intend to improve habitat (cover, forage and road management) for deer and elk. BLM should further protect other wildlife, especially sensitive, threatened and endangered species. The State supports the creation of older stand conditions through approved silvicultural practices. The State urges BLM to comply with the Final Recovery Plan for the Northern Spotted Owl and continue consultation with the U.S. Fish and Wildlife Service to reach consensus on the best way to provide for the recovery of the northern spotted owl and other threatened and endangered species.

Old Growth. BLM districts are proposing various techniques to maintain/produce older-aged forests. The State supports BLM's overall approach to maintain and protect old growth stands through biological diversity. Old growth-dependent species must also be protected when harvesting old growth in the general forest land allocation through landscape diversity and accelerating older forest conditions on adjacent BLM lands.

Livestock Management. The State recommends that BLM develop detailed allotment management plans for every grazing allotment. Of concern is livestock's impact on fish and wildlife habitat, big game, and riparian-dependent species. The State encourages range improvement projects to increase forage and water developments which should help draw livestock away from riparian areas.

Minerals and Energy. BLM should acknowledge and preserve access to state-owned mineral rights. BLM should further recognize the value of mineral and energy resources when making land management decisions.

Socio-economic. BLM's draft plans have not sufficiently addressed the social and economic implications of their preferred alternatives on Oregonians. BLM needs to more specifically address local impacts of district plans on community stability, concentrating on the social impacts. Job multipliers should be further evaluated. Monitoring of the socio-economic conditions created by implementation of the preferred alternatives needs to be addressed.

Road Management. The State recommends that each BLM district develop a comprehensive road management plan. The plans would be used to manage access which in turn would improve wildlife habitat, water quality, and recreational opportunities.

Special Plant and Tree Species. BLM should expand its inventory of sensitive plants and implement standards for protection including monitoring. BLM should aggressively follow the interim management plan for managing Pacific yew.

Tribal Concerns. Lands administered by many BLM districts were used by Native Americans and contain historically significant cultural and spiritual sites. The State believes BLM should identify, during project planning, these sites and protect them during implementation of management activities.

Standards and Monitoring. The implementation of biological diversity by BLM will mandate a comprehensive monitoring program, including a dedicated funding source. This is critical in determining whether the expected future conditions are being accomplished. Specific, measurable standards must be a component of the total monitoring package. The State recommends that BLM strengthen its standards and monitoring program in the final plans.

Budgets. Adequate funding is essential for implementation and monitoring of BLM's biological diversity strategy. Dedicated funds for expanded intensive management programs being proposed are needed. The State believes that BLM budgets should not be necessarily linked to allowable sale quantity levels.

Detailed State Final Coordinated Response. Questions regarding the State of Oregon's Final Coordinated Response should be directed to: Governor's Forest Planning Team, 155 Cottage Street, Salem OR 97310, Phone: (503) 378-8127

L0925

STATE OF OREGON'S FINAL COORDINATED RESPONSE
TO
BUREAU OF LAND MANAGEMENT
DRAFT RESOURCE MANAGEMENT PLANS
AND
DRAFT ENVIRONMENTAL IMPACT STATEMENTS

I. INTRODUCTION

The Bureau of Land Management administers 2.5 million acres of land in western Oregon including parts of Klamath County. In total, this accounts for approximately nine percent of the forest land base in western Oregon. Fish and wildlife, domestic water, timber, recreation, grazing, and minerals are just some of the many values found on these lands. Revenues from managing BLM resources contribute millions of dollars each year to Oregon counties for schools and roads. The importance of BLM lands to the people of Oregon cannot be over-emphasized.

Recognizing a need to coordinate State responses to federal resource management plans, the Governor's Forest Planning Team was created in 1987. This team, which includes representatives from twelve state agencies, has worked together over the last five years to develop coordinated responses to major federal land management planning documents.

Most recently, the Governor's Forest Planning Team has worked closely with five BLM districts (Medford, Salem, Roseburg, Coos Bay and Eugene), one Resource Area (Klamath Falls) and the State Office in Portland in an effort to better understand BLM's planning process. The State also conducted six "open houses" scattered throughout the state to solicit input on BLM's draft plans. Comments received from the publics' review of the State's Proposed Coordinated Response have also been considered. Input from the public, state agencies, and Oregon State University form the basis for the State's final response.

The following document is the State of Oregon's Final Coordinated Response to the six draft Resource Management Plans (RMPs) and Environmental Impact Statements (EISs). The State's final response represents a consolidated response to the six draft RMPs and EISs and includes comments appropriate to specific issues by districts/resource area. Individual state agency comments and Oregon State University's Report have been attached for review.

We appreciate the cooperation that BLM districts, the Klamath Falls Resource Area and the State Office have given the State Team in understanding the planning process. This kind of working relationship strengthens the ability of the State and BLM to develop resource management plans acceptable to Oregonians and the Nation.

L0925

II. MAJOR ISSUES

A. Ecosystem Management. How will BLM implement ecosystem management that responds to creating sustainable, productive, and healthy ecosystems while still producing goods and services?

B. Land Use. How can BLM better address problems encountered in managing rural interface areas? Has BLM met the federal consistency requirements of the National Coastal Zone Management Act and Oregon's Coastal Zone Management Program? Has land tenure been adequately addressed? How has State ownership of surface/subsurface ownership rights been handled?

C. Fish and Watershed Management. How will BLM use analytical watersheds to measure cumulative effects of management activities? How will riparian areas and wetlands be protected? How will fish habitat be protected and enhanced?

D. Air Quality. How should BLM address the use of prescribed fire as a forest management tool in terms of the potential impacts on air quality?

E. Tourism and Recreation. How should BLM manage for recreation, visual resources, and Wild and Scenic Rivers?

F. Timber Management. Are BLM's timber growth and yield assumptions valid? How will silvicultural practices be used to support projected harvest levels? Will BLM be able to produce the harvest levels predicted by land allocations? Has BLM adequately addressed forest health?

G. Wildlife Management. How should BLM districts manage for big game habitat? What snag levels should BLM provide for cavity-dependent birds and other wildlife? How should sensitive, threatened and endangered wildlife species be managed?

H. Old Growth and Mature Forest. How will BLM manage its forests to maintain old growth and mature forest composition?

I. Livestock Management. How will BLM manage its grazing lands to produce forage for livestock and wildlife while protecting other resource values, in particular riparian areas?

L0925

J. Minerals and Energy. How should BLM recognize and manage its mineral and energy resources?

K. Socio-Economic. How will the adopted plans affect economic opportunities in surrounding communities? What impact will the plans have on socio-economic stability in the planning area and statewide?

L. Road Management. How should districts/resource areas manage their road networks to promote compatibility with resource uses?

M. Special Plant and Tree Species. How should BLM protect special status plant and tree species?

N. Tribal Concerns. How should BLM districts protect traditional Tribal cultural and spiritual sites?

O. Standards and Monitoring. Does BLM have measurable standards and a comprehensive, aggressive monitoring program to determine whether plans are meeting short and long-term expected future conditions?

P. Budgets. What budget will BLM districts need to carry out the preferred alternative? How should the districts react if a smaller budget allocation occurs?

L0925

--DISCUSSION OF MAJOR ISSUES--

A. Ecosystem Management. How will BLM implement ecosystem management that responds to creating sustainable, productive, and healthy ecosystems while still producing goods and services?

1. Concepts and Principles

Managing lands and resources based on ecological principles has been emerging as a new view in scientific literature, research, and in public policy. This view is seen as being not only biologically sound, but also more attuned to public expectations and values of doing a better job at managing our natural resources. It makes sense for programs and organizations to work under a systems concept which includes people, animals, soils, plants, water, climate, with the processes of nature working together as a whole.

The concepts presented in this section and in the State's paper, titled, Ecosystem: A Coordinated State Response To BLM's Resource Management Plans (Appendix 1), were derived from literature searches, field trips, and discussions with researchers and land managers on defining principles and implementation strategies for ecosystem management.

The State believes that the guiding principle of ecosystem management is to create a more ecologically sustainable, productive, healthy, and resilient natural ecosystem. How to meet this objective is a complex issue land managers must face. One thing is certain, however, a change is needed on how we have traditionally managed our resource lands. We believe that change may be achieved through the careful application of ecosystem management.

The Revested Oregon and California Railroad Grant Act (O&C Act) and the Federal Land Policy and Management Act are the two major pieces of legislation that govern the management of BLM lands in Oregon. Within these laws, ecological principles define management constraints, management approaches, and predictions of those ecosystem responses necessary to ensure proper maintenance of sustainable systems. People will continue to play a major role in this ever-changing ecological system.

Another law which has influenced management on not only BLM lands but other federal, private and state lands is the Endangered Species Act. This Act requires the protection and recovery of species determined to be endangered or threatened, regardless of other legal mandates.

2. Goals of Ecosystem Management

The State's comments on BLM's biodiversity strategy are based on the following five objectives:

a. Maintenance and restoration of biological diversity at four levels of organization: geographic scale, genetic composition, communities and ecosystems.

b. Sustainability of components and processes of ecosystems over time and long-term productivity and resiliency of such ecosystems.

c. Contribution to the basic needs of people and communities who depend on the land for subsistence, livelihood, and social and spiritual development.

d. Consideration of sensitive ecosystems such as wetlands, riparian zones, and fragile sites.

e. Provide consistent linkage between forest health and ecosystem management.

f. Intensively monitor and evaluate implementation of biological diversity to determine if short-term goals are leading to long-term expected future conditions.

3. Consistency with Legal Mandates and Authority

BLM manages 84 percent of its land in western Oregon/Klamath Falls Resource Area under the Revested Oregon and California Railroad Grant Act (O&C lands) and Coos Bay Wagon Road (CBWR) lands. The remaining 16 percent are referred to as Public Domain lands managed under the direct authority of the Federal Land Policy and Management Act (FLPMA). The O&C/CBWR and Public Domain lands have different legal mandates on how they should be managed. BLM has stated in its preliminary planning documents that it would make planning decisions consistent with these laws.

While it is conceivable that, with the requirements of the Clean Water Act, the Clean Air Act, and the Endangered Species Act, Public Domain and O&C/CBWR lands could be managed similarly; it is not obvious that they should be so managed. The mandates are different; the management approaches to protect and enhance may be different; and, the beneficiaries of these approaches are different.

BLM draft plans have not explained the rationale on how their biological diversity-based preferred alternatives are consistent with its legal mandate for O&C/CBWR lands. The relationship between the preferred alternatives' ecosystem management concepts and existing laws governing the management of O&C/CBWR lands need to be clearly articulated in each final plan.

4. State's Recommendations

Biological diversity principles used by BLM in developing their draft plans represent a holistic approach to managing resource lands. We commend BLM on this effort.

The State's comments on biological diversity, found in the draft plans, are based on principles found in our position paper (Appendix 1). These principles are described below.

a. **Expected Future Condition.** BLM RMPs should identify and examine the expected future condition for biological diversity. Expected future condition goals should relate to the compositional, structural, and functional attributes of ecosystems and should include a regional perspective. BLM districts need to express in greater detail what the expected future conditions will be from implementing the preferred alternatives.

b. **Prescriptions.** RMPs should include specific, measurable prescriptions or standards which when implemented would work toward meeting the expected future condition. While prescriptions are part of each draft plan, it is not clear how they will meet the biological diversity short- and long-term goals.

c. **Ecosystem Condition.** RMPs should provide information on the current condition of ecosystems and their compositional, structural, and functional attributes to establish "baseline conditions." Plans need to identify areas of concentrated biological diversity and ecosystems (e.g., old growth) at high risk due to human activities. "Baseline conditions" should be used to monitor trends in biological diversity over time and to make necessary adjustments in plans. Standards and monitoring plans for evaluating whether they are being met need strengthening.

d. **Research and Adaptive Management.** The RMPs should detail how BLM plans to integrate management, monitoring, and research to continually apply adaptive management and improve the scientific basis for ecosystem management. This has not been sufficiently addressed in the draft plans.

e. **Ecosystem Monitoring.** RMPs should include specific monitoring questions for measuring whether management prescriptions are meeting the expected future conditions. For example, is forest age class distribution within a certain forest allocation moving toward or away from the expected future condition? BLM plans should integrate management, monitoring, and research to continually apply adaptive management and improve the scientific basis for ecosystem management. BLM districts need to develop more comprehensive, monitoring plans to measure the long-term commitment of ecosystem management.

f. **Ecosystem Dependency.** BLM operates under laws and regulations which require production of goods and services of all types. People are part of, and are dependent on, BLM-managed ecosystems. BLM plans should describe the linkage and dependency (social, economic, spiritual) of local and regional communities, groups, industries, etc., on ecosystems within each land allocation.

g. **Threatened and Endangered Species.** RMPs should reflect the special considerations BLM is providing for ecosystems that contain endangered, threatened, and sensitive species. This includes meeting the requirements of various recovery plans, as well as ecosystem management provisions for preventing species from being listed. Special emphasis should be placed on the recovery requirements of the spotted owl and provisions for anadromous fish. BLM has developed its strategy for meeting the requirements of the Endangered Species Act for the spotted owl and other species. Whether this strategy is sufficient to meet the upcoming legal mandates is unknown at this time.

h. **Silvicultural Practices.** BLM plans should identify the silvicultural practices and the cause-and-effect relationships which will lead to the goals of biodiversity/ecosystem management. This includes guidelines for: timber harvest and road management, achieving species diversity, retention and restoration of old growth and other successional stages, rotation ages, vegetation control, stand conversion, artificial regeneration and genetic improvements, hardwood management, fertilization, and prescribed fire. BLM has presented some innovative forest management approaches to managing its lands in response to protecting sensitive, endangered and threatened species plus other resource values.

i. **Coordination.** BLM should clearly specify methods for coordinating biodiversity and ecosystem management goals with adjacent forest landowners. Specifically, BLM must coordinate with the Forest Service and relevant state agencies to assure that activities to achieve regional/landscape biodiversity are compatible with plans and activities of these agencies. BLM plans should explain in more detail how they plan to coordinate their biological diversity program with adjacent landowners and more broadly on a landscape level.

5. Summary

The State applauds BLM's biological diversity strategy as it recognizes the forest ecosystem from a holistic perspective rather than the traditional single-emphasis management. Each draft plan evaluates the important components of biological diversity and attempts to predict both short- (10-year) and long-term (100-year) expected future conditions. The concern over fragmentation, due to ownership patterns and past intensive management practices, may be mitigated by the application of the Designated Conservation Areas (DCAs) grid, Old Growth Emphasis Areas, Connectivity Areas, special areas, and other allocations which promote an older forest structure. Intensive long-term monitoring will be essential to determine if BLM's biological diversity strategy is meeting expected future conditions.

Many questions remain to be answered by the scientific community and land managers on how to successfully manage lands using ecosystem management. BLM's ecosystem management approach will be very helpful in answering these questions over time.

B. **Land Use.** How can BLM better address problems encountered in managing rural interface areas? Has BLM met the federal consistency requirements of the National Coastal Zone Management Act and Oregon's Coastal Zone Management Program? Has land tenure been adequately addressed? How has State ownership of surface/subsurface ownership rights been handled?

1. Rural Interface

BLM has identified the management of rural interface areas as one of eleven major planning issues to be addressed by each district and the Klamath Falls Resource Area.

The term "rural interface" refers to those areas where BLM-administered lands are adjacent to or intermingled with predominately privately owned lands zoned and/or used for agricultural, forest, rural residential, and other resource and nonresource purposes.

Owing to the close proximity of BLM holdings with other lands and population growth in these areas, BLM, private and other public landowners are expected to experience increasing levels of conflict with one another over the management and use of their respective ownerships.

Taken together, the draft resource plans state that rural interface conflicts affecting the management of BLM lands in Oregon are becoming greater, with the most extensive problems occurring in the Medford District. One of the most visible results of this development is that wildfires over the last several years, particularly in southern Oregon, have destroyed and/or threatened increasing numbers of lives, resources and structures in rural interface areas.

Statewide, BLM has calculated there are approximately 194,000 acres of BLM land lying adjacent to private lands currently zoned to allow development on 1 to 20 acre lots.

a. BLM's Response to Rural Interface Problems

The preferred alternative in each district's draft plan conceptually treats the rural interface issue in the same manner. Each district proposes to establish a buffer area on its lands which lie adjacent to private lands zoned with minimum lot sizes ranging from 1 to 20 acres.

Within these buffer areas, BLM management activities would be altered where feasible to mitigate the concerns of nearby residents. Examples of the kinds of special management practices undertaken by BLM in the interface buffer include restrictions on public access, road building, harvesting methods and frequency, and application of herbicides and pesticides.

b. State's Recommendations

The State's review of BLM's interface strategy is based principally on a policy paper titled, Recommendations to BLM For Managing Rural Interface Areas, transmitted to BLM from Governor Roberts in December 1991. (Note Appendix 1) The paper, which BLM encouraged the State to produce, formally acknowledges that the problem of rural interface areas involving BLM lands is a matter of critical State concern.

The paper calls upon BLM to enter into a special partnership with the State of Oregon so that the rural interface problem can be addressed comprehensively rather than in a fragmented, uncoordinated manner. Unlike other states, Oregon presents BLM with a unique opportunity through its recognized statewide land use program and related initiatives by the Department of Forestry and other agencies to deal with rural interface areas.

The State's paper contains six specific recommendations aimed at enabling BLM to join with state and local governments in achieving significant progress on various aspects of the interface problem, including policy development, agency coordination, information exchange, and conflict resolution.

Unfortunately, after review of the six draft RMPs/EISs, it is disappointing to note that BLM apparently rejects a **proactive** approach described in the State's paper for dealing with rural interface areas.

The State believes that BLM's passive strategy of relying on uniform buffering of federal lands will do little to alleviate new inappropriate developments in rural interface areas. This strategy further will severely limit BLM's opportunities to implement effective forest management programs on these interface lands.

The State urges BLM to incorporate the following recommendations, as described in the State's interface paper and the Department of Land Conservation and Development's comments to the RMPs (Appendix 2), into the final resource management plans.

(1) BLM should act consistently with Oregon laws, policies, and programs adopted to protect the State's forest land base for timber production and other forest uses.

(2) BLM should increase its participation in Oregon's statewide land use planning program. This could be accomplished through establishing joint State and BLM working groups to further BLM's involvement in the statewide land use program and other related State efforts to address rural interface problems.

(3) BLM's State Office should provide policy guidance to districts for addressing rural interface issues.

(4) BLM, in cooperation with the State of Oregon, should establish and apply a revised definition of rural "interface areas" which takes into account existing uses; current federal, state and local plans; and other land use factors.

(5) BLM should incorporate the rural interface issue into its agreement with the State of Oregon for monitoring the implementation of BLM management plans.

2. Federal Consistency

Four BLM districts (Salem, Coos Bay, Eugene and Roseburg) administer lands covered under the federal consistency requirement as provided in the Coastal Zone Management Act. Under the Act, any federal activity, within or outside the coastal zone that affects any land or water use or natural resources of the coastal zone must be carried out in a manner which is consistent, to the maximum extent practicable, with the enforcement policies of the State's federally approved coastal management program. The mandatory enforcement policies contained in the Oregon Coastal Management Program are:

a. The Statewide Planning Goals adopted by the Land Conservation and Development Commission;

b. Acknowledged city and county comprehensive plans and land use regulations; and

c. The statutory authorities and regulations of selected state agencies.

A preliminary analysis of a federal agency's consistency determination is made by the State following review of the draft plan or project being proposed. The final consistency determination by the State of Oregon is made following release of the final environmental impact statement on the adopted plan or project.

Based upon preliminary analysis, it appears that the draft RMPs for the four districts are consistent with Oregon's Coastal Management Program.

However, formal State concurrence with BLM's determination of consistency cannot be made at this time due to a lack of specific documentation in the RMPs which demonstrates that all of the applicable mandatory state authorities listed in the Oregon Coastal Management Program have or will be met.

For the purposes of its final federal consistency determination, BLM will need to document in the final EISs how the selected management alternative for each RMP complies with the statutory authorities and regulations of the Oregon Coastal Management Program. Until such an analysis is conducted and incorporated into the final RMPs, full concurrence by the State on BLM's consistency determination with the Oregon Coastal Management Program cannot be made. (See Department of Land Conservation and Development's comments on federal consistency -- Appendix 2.)

3. Land Tenure

BLM districts have inventoried and categorized their lands according to resource value (e.g., timber, wildlife, wetlands), land status (e.g., O&C or Public Domain) and ownership pattern (e.g., scattered or blocked). We have three concerns on how districts have addressed land tenure.

First, there seems to be no uniformity on how districts have categorized their lands. Coordination between adjacent districts is lacking and land tenure maps included in the plans are difficult to interpret. We strongly recommend districts develop common criteria and coordinate among themselves land tenure decisions to interject uniformity into the process.

Second, an In-Lieu Land selection settlement has occurred between the State and BLM within the last year. The State, according to the Courts, is allowed to select 5,202.29 acres of BLM Public Domain land. Our concern is the lack of mention of this settlement in the Land Tenure section for the preferred alternatives. We request that language be inserted which clearly states BLM's responsibility to accommodate the State's selection within the requirements of the law. (Note Division of State Lands response -- Appendix 2.)

Lastly, O&C and Coos Bay Wagon Road lands that are suitable and available for timber production should not be exchanged for unsuitable or single use lands. These lands should be retained for forest production.

4. Navigability

None of the draft plans acknowledge existing or potential State ownership claims on navigable waterways within BLM districts. Language, noted in Division of State Lands response, should be include in each final plan regarding navigability.

C. Fish and Watershed Management. How will BLM use analytical watersheds to measure cumulative effects of management activities? How will riparian areas and wetlands be protected? How will fish habitat be protected and enhanced?

One of the State's goals is to ensure that BLM restores and protects riparian-dependent and upland resources. This is consistent with BLM's direction in the Federal Land Management and Policy Act, the O&C Act and other federal and state laws. It is also consistent with BLM's long-term objective to maintain and enhance watersheds that currently are in good condition while improving those identified as declining. The comments and recommendations that follow are based on this goal.

Rivers, streams and lakes, and their riparian areas are valuable resources. Within their area of influence, they provide habitat for wildlife and fish and furnish domestic water and recreational opportunities such as boating, swimming, and fishing.

BLM's Fish and Wildlife 2000 -- A Vision For The Future has set several objectives for improving water quality and riparian area and watershed conditions in Washington and Oregon. The goal, according to this plan, is to improve nearly 656 miles of streams. Evaluation and monitoring is also emphasized as a major component of the program.

Maintaining and enhancing fishery resources, as noted in all of the draft management plans and the BLM's Fish and Wildlife 2000, is an admirable undertaking. Careful management of riparian areas combined with manipulating harvest schedules in watersheds and instream improvements should help protect the fishery resources in western Oregon. As a general rule, BLM should not substitute restoration, enhancement projects or mitigation for adequate protection of riparian dependent resources except when damage from essential activities is unavoidable. BLM's proposed biological diversity strategy should help to achieve the expected future conditions desired in watersheds.

1. Fish

A State goal is to restore and protect fish stocks. Declining fish stocks in the Columbia, Snake, and several southern Oregon rivers will require an unprecedented effort by resource managers to reestablish acceptable wild fish populations. This effort must include cooperation by all landowners on the management of watersheds and, in particular, riparian areas. BLM needs to be an active player in this long-term program.

Many studies are underway (some 270 on the Columbia River system alone) to examine the causes for declining fish runs in the Northwest. Preliminary theories on why fish runs are declining range widely from dam construction to deteriorating conditions of our watersheds. Many believe it is a combination of many factors, all interrelated, which have led to the problem.

The types of fish habitat enhancement projects over the next decade are generally not enumerated or described in the draft plans.

Fishery concerns which BLM can influence in their land management decision process include: watershed management (including riparian area protection), forest management practices, and grazing.

Sensitive Fish Species

Several of the listed sensitive fish stocks, which have been noted by the Oregon Department of Fish and Wildlife (ODFW) as occurring on the various BLM-administered planning areas include: chinook salmon (Lower Columbia River and South Coast fall run stocks), chum salmon, coastal cutthroat trout (anadromous Columbia River basin stock), coho salmon (Lower Columbia River and South Coast stocks), Oregon chub, Jenny Creek sucker, redband trout, Lost River and Short-nosed sucker just to name a few.

Of particular concern is declines in fish production in the Illinois River. Winter steelhead are of special concern as this stock has been petitioned for threatened or endangered status under the Endangered Species Act. The basin's fall chinook salmon and coho populations have also declined.

BLM has surveyed its lands and has concluded that aquatic habitat on some of its lands is not in good condition. These conditions will seriously influence BLM's ability to improve habitat for sensitive fish stocks occurring on their lands.

The State recommends that BLM conduct a survey to identify declining fish populations and develop recovery plans for high risk populations. BLM should take aggressive action to improve sensitive fish habitat working closely with the State, other federal agencies, Tribes, and interest groups. BLM should describe more completely how their preferred alternatives will impact sensitive fish stocks, and what steps would be taken to mitigate adverse impacts.

2. Water Quality and Quantity

a. Water Quality

A State goal is to ensure that BLM meets or exceeds state and federal water quality standards. The draft BLM plans have stated that they meet federal and state water quality standards; however, several districts have identified streams that do not currently meet these standards. Best Management Practices (BMPs) have been included in each BLM plan which present general prescriptions for meeting water quality.

The State believes that the BMPs listed in the draft plans contain few measurable standards and varied widely between districts. Furthermore, standards are neither clear nor specific enough to be used in monitoring water quality. No information is provided in the plans to show how managers will make determinations regarding water quality and erosion potential for forest management activities.

Further concern has been expressed over the lack of information on landslides. Landslide prevention is a critical component to maintaining water quality on forest lands. BLM has identified fragile sites (unstable soil areas) through its Timber Production Capability Classification inventory. While we assume that the inventory included the identification of potential landslide areas, protective standards for these sites have not been clearly described in the draft plans.

We believe BLM districts have not sufficiently addressed potential landslide problems. The draft plans surprisingly lack information regarding slope stability which is needed for, among other things, the location of waste disposal sites.

The State recommends that BLM districts strengthen their commitment to water quality through the following:

a. BLM needs to make BMPs more specific to assure that water resources objectives are being met. BMP language should include conditions for which BMPs are applicable. Supporting policies and documents also need to be consistent with the BMPs.

b. Consistency through coordination in implementation and monitoring are needed not only within a district but also between districts. The State recommends that BLM develop more comprehensive standards utilizing such expertise as the Forest Service (Siuslaw National Forest), State Department of Forestry and others in identifying (using GIS) and protecting potential landslide areas.

c. Where streams do not meet State water quality standards for temperature, BLM should not allow activities, (e.g., grazing) which would increase temperatures over the long term.

   Temporary (one-season) temperature increases would be permissible from the following activities: restoring or improving riparian areas or in-stream habitat; stream bank protection; required transportation system crossings; harvest corridors; structures associated with putting water to beneficial use; or other essential activities such as fire suppression, flood control, or administering BLM lands. Water temperature increases from these activities should be minimal and adequately monitored, especially for cumulative effects. Temporary disturbances should be scheduled when adverse effects to beneficial uses would be minimized.

d. BLM should evaluate future road design, construction, and maintenance standards to ensure protection of water quality. As noted in the Oregon State University response, adequate culvert sizes (consider 25 and 50 year flood) are necessary for draining runoff. Catastrophic road failures from poor road design and plugged culverts, can have a major impact on downstream channels, riparian area values and fisheries resources. The Oregon Forest Practices rules are currently being revised to consider larger culvert sizes on private lands.

The Department of Environmental Quality (DEQ) has conducted intensive monitoring of water quality in several basins in western Oregon since publication of BLM's Analysis of the Management Situation. BLM is encouraged to contact DEQ for the results of these monitoring programs especially on streams running through BLM lands. (Note DEQ comments in Appendix 2.)

3. Water Quantity

A State goal is to provide a sustainable amount of water to meet the needs of Oregonians and fish and wildlife resources.

Successive years of drought statewide have elevated concerns over the availability of water. Most BLM plans have addressed streamflows, beneficial uses, community watersheds, and BLM wells. However, additional information is needed to strengthen the discussion on water quantity.

The State makes the following recommendations:

a. The final plans should acknowledge the limits on the availability of surface water and address surface water quality problems.

b. Districts should describe watershed improvement and stream restoration activities which increase low season flow.

c. District plans should address ways to conserve and reduce water consumption and soil compaction.

d. BLM should expand their discussion concerning the availability of groundwater and groundwater quality problems.

e. Final plans should provide a more thorough discussion of the potential effects of the alternatives on water yields and streamflows. Other recommendations are outlined in Water Resources Department's response (Appendix 2).

4. Watershed Management

Oregon's Strategic Water Management Group has developed a watershed management goal for the State. This goal, in part, notes that a watershed management strategy must enhance and restore watershed ecosystems in order to optimize the natural resources of the State for all beneficial economic, environmental, and social uses.

BLM districts have divided their lands into analytical watersheds using a watershed condition index to measure current and future conditions. The State supports this strategy, in principle, as it should help BLM to achieve State objectives for water and wildlife resources on lands they administer.

Planning by analytical watersheds serves several very important functions. First, it allows district specialists the opportunity to plan management activities on a much smaller, more workable, geographic setting. Second, districts have a better opportunity to monitor the cumulative effects of all management activities on water quality and quantity, fish, wildlife, and recreation, plus other resources.

BLM's methodology of using an index to measure the cumulative effects of various current and future management practices within individual watersheds has merit. The condition of watersheds could be used to determine where forest management activities could or could not occur. However, the State is unclear how the key watershed condition indicator used in the plans (the watershed condition index) was generated; how it was used in management planning; how it will be used in standards, guidelines, and monitoring; and how it will be validated.

The State is concerned about predictions in the draft plans' preferred alternatives that some watershed conditions will decline over the life of the plans or even worsen from existing poor conditions. For example, the Salem District predicts that in 18 of its 27 analytical watersheds (67 percent), conditions will either decline to a "minor" or "significant" degree over the short-term under the preferred alternative. According to BLM's Executive Summary: Western Oregon Draft Resource Management Plans/Environmental Impact Statements, 45 watersheds "probably" will have declining conditions over the next ten years under the preferred alternatives.

The State fails to understand how declining watershed conditions will meet water quality and other resource objectives set forth in the draft plans or even state and federal water quality standards. It would seem that basin-specific prescriptions to restore or enhance water quality (e.g., sediment and temperature) and aquatic habitat have not been adequately addressed.

Recommendations on watershed management and condition index that BLM districts need to consider when they develop their final plans are listed below.

a. In order to obtain more significant data from evaluation and monitoring, BLM should subdivide analytical watersheds greater than 10,000 acres into smaller, more manageable units.

b. BLM should set watershed impact standards to help guide forest management activities. Standards should address maximum soil compaction, erosion rates, equivalent clearcut area, and relative percentages of seral stages. If standards are projected to be exceeded, proposed projects within a watershed should be reevaluated. Similar adjustment would also occur if monitoring determined standards are not being met.

c. BLM should display severely impaired streams identified by DEQ's 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution within analytical watersheds. This would better indicate existing on-the-ground conditions in the many subwatersheds within a single analytical watershed and provide more meaning to BLM predictions of future watershed condition.

d. Watersheds should be classified and prioritized according to current functional and ecological conditions and importance for maintaining viable wildlife populations. Watershed-specific standards should be developed, in cooperation with adjacent landowners, to restore or maintain watershed conditions. A proactive approach may be used which would include establishing riparian management areas of sufficient width to achieve restoration on streams in poor condition. Districts should place a high priority for restoration on these watersheds. The State and other interest groups should be included in restoration plans. We commend the Medford District for adopting an aggressive approach to watershed/riparian area restoration by developing watershed management plans for 28 streams.

e. BLM should analyze the relationship between calculated watershed condition indices and current flow and water quality conditions. This should enable BLM to test the validity of the rating system. BLM should use existing environmental assessment information to validate watershed condition index values as much as possible. Additional discussion on how BLM developed and used the watershed condition index in their planning process should be included in the final plans.

f. Management activities should be monitored in each watershed to determine the cumulative effects on water, soil, fish, wildlife, and other resources. It will be difficult to accurately monitor watersheds where BLM manages only a small portion of the land base. The State strongly encourages cooperation and communication between landowners in multiple ownership watersheds. Cooperative ventures should involve evaluation of watershed condition, land management planning, and watershed monitoring for protection of water supply, water quality, and fish and riparian-dependent wildlife. Monitoring of multiple ownership watersheds further would serve as a benchmark for comparison with other watersheds with greater BLM ownership.

We commend the Medford District for recognizing watersheds and riparian areas with high cumulative effects. The district has deferred some 28,000 acres from harmful activities for the next ten years because of poor watershed conditions.

5. Riparian Area Management

Water and associated streamside vegetation supply a unique ecological function. Riparian areas have their own distinctive environment and provide habitat for many fish and wildlife species inhabiting BLM lands. Riparian areas also function as corridors between BLM's Old Growth Emphasis Areas and other anchors of biological diversity within a landscape context.

The State's goal for riparian areas is to protect, maintain and restore (where necessary) long-term aquatic productivity and the functional and ecological values of adjacent terrestrial areas directly influencing aquatic systems. This should be accomplished by establishing standards for relevant factors which affect attainment of the State goal.

BLM districts have inventoried streams within their specific administrative area. Stream miles by order, acres of riparian area (mostly order 3 and above), pollution type and severity, and vegetative classes have been identified and summarized in the draft BLM documents. We commend the districts on this effort, as it should set the stage for programs designed to improve watershed/riparian ecosystems.

We would recognize the Klamath Falls Resource Area's commitment to produce a Watershed Management Practices Guide. While the content of this guide was not outlined in the draft plan, it could serve as an innovative approach toward meeting desired water quality goals. One item that we would encourage the resource area to reevaluate in their guide is the protection standards proposed around lakes which is less than other western Oregon BLM plans.

The importance of protecting riparian areas cannot be over emphasized. Several recent studies by a combination of federal and state agencies, Tribes, and others have surfaced in response to the declining fishery resource in Oregon. Studies by COPE through Oregon State University, Scientific Panel on Late-Successional Forest Ecosystems Report to the House Of Representatives, Forest Service (Upper Grande Ronde River Plan, Riparian Management Guide for the Willamette National Forest), and the State of Oregon (Draft Water Classification and Protection Project, and Anadromous Fishery Study) are just a few of the many studies recognizing the need for a greater understanding of watershed/riparian ecosystems and the fishery resource.

Considering the importance of riparian areas on BLM lands contributing to water quality, water quantity and fish and wildlife habitat, the State makes the following recommendations:

a. BLM needs to define an expected future condition for their riparian management areas and provide management directed at maintaining or restoring this condition. The State recognizes that riparian systems are dynamic and change with time due to catastrophic floods, wind, and other natural ecological processes.

b. Standards should be established for all stream orders and should reflect functional and ecological differences between stream orders. At a minimum, these factors should ensure: long-term supply of large woody debris recruitment, snags, shading, water quality (temperature, turbidity), microclimate, floodplain protection, and critical habitat for wildlife and sensitive species.

c. Riparian area management needs to be addressed at the watershed or landscape level and should reflect the current conditions of watersheds.

d. Restoration of riparian areas identified in "poor" or deteriorating conditions should be a high priority.

e. Riparian areas in "good" condition should be maintained in good condition.

f. Riparian management areas (RMAs) should be an appropriate width to meet water quality standards, supply potential large woody debris (loading of complex wood structure in stream) and down wood (tons/acre in riparian management areas), and recognize and manage for sensitive riparian-dependent species within a landscape context.

Buffer widths may vary depending upon overall watershed condition, stream order, beneficial uses, ecoregion, impact to sensitive species, and physical characteristics within/adjacent to streamside area. Critical components that should be considered when developing buffer widths include, but are not limited to, overall watershed condition, shading (water temperatures), sedimentation and turbidity, nutrient recycling, large woody debris, snags, and critical habitat for wildlife and sensitive species. BLM recognized some of these important ingredients when developing their riparian area protection policies.

g. Concern has been expressed over protection of intermittent streams, mainly stream orders 1 and 2. Some have suggested (more accurate mapping is needed) that these streams may comprise as much as 79 percent of the total stream miles on BLM lands in western Oregon. The State recognizes that these smaller streams serve an important function for fish, wildlife and water quality. Greater knowledge through research on the importance of these streams to fish, wildlife and water quality is needed. We believe that individual forest project plans should map and evaluate order 1 and 2 streams existing within the project boundary before a plan is implemented. If it is determined in pre-project planning that channel integrity or identified beneficial uses need protection, then appropriate protection (including riparian buffers) should be applied. Project planning should also evaluate the potential cumulative effects that activities could have on the beneficial uses outside (subbasin level) of the project area.

Intermittent streams should be managed according to specific standards established for large woody debris recruitment, snags, shading, water quality (temperature and turbidity), microclimate, and critical habitat for wildlife and sensitive species. Disturbance of streamside vegetation and soil must be kept to a minimum. The standards may be accomplished by a variety of techniques depending upon the beneficial uses in question. These include but are not limited to: leaving conifer wildlife trees along these streams; leaving hardwoods, nonmerchantable conifer trees and brush that occur along them; having large woody debris placed in them during forest management activities, including logging; avoiding logging through them; and overall, maintaining and protecting the integrity of the watercourses.

h. Riparian area buffers identified on-the-ground for protection of specific riparian area resources would have no-scheduled harvest planned. Harvesting within these riparian buffers might occur for in-stream/streambank improvement projects, harvest corridors, fire control or other specific, short-term projects. Salvage logging within the riparian management areas should be discouraged except where detrimental environmental and/or structural (e.g., bridges or culverts) damage would be anticipated from leaving downed trees.

i. While the State recognizes that the primary focus within riparian management areas on BLM lands will be streamside and associated vegetation, taking no action may not improve conditions within these areas, especially for large woody debris recruitment. As an example, the State is concerned about the large amount of alder-dominated riparian areas on BLM lands. These hardwood stands currently do not have the near-term potential for producing effective types and quantity of coarse woody debris nor will they likely have that potential in the future unless restoration measures (e.g., planting conifers within hardwood-dominated riparian areas) are taken.

For both woody debris and water quality problems, restoration projects, if implemented, should use adaptive management combined with intensive evaluation, monitoring, and data evaluation to determine long-term and short-term tradeoffs. Strict project standards followed up by evaluation and monitoring are the keys to a successful stream restoration program.

j. Exclude livestock in grazing allotments where poor riparian area conditions have been identified until such time as the riparian area reaches good condition.

k. Mining activities in or adjacent to streams should be managed in a way not to adversely impact riparian area vegetation and water quality.

6. Wetlands

BLM should increase its recognition of wetlands as a riparian resource in a manner consistent with the Bureau's Riparian-Wetland Initiative for the 1990's. Recommendations that the State would suggest be included in the final plans are:

a. Specifically name wetlands as features for which riparian management areas will be established.

b. Specifically identify wetlands that will be restored or enhanced.

c. Acknowledge the need to coordinate and cooperate with public and private landowners (via Statewide memorandum of understanding) in order to 1) develop a common inventory of wetlands; 2) establish criteria for determining wetland significance for protection or restoration; and 3) develop coordinated priorities to protect and restore public wetlands.

d. Acknowledge that the preservation of wetlands on BLM lands makes a major contribution to the attainment of the Oregon Benchmark goals on wetlands (i.e., 100% of 1990 Oregon wetlands still preserved in the year 2000).

The State endorses the Medford District and the Klamath Falls Resource Area inventory of wetlands and recognition of smaller one- to three-acre sites. This should set a standard that other districts should follow in their final plans.

7. Summary

BLM districts should develop and utilize comprehensive watershed management plans to improve water quality, water quantity, and fish and wildlife habitat within riparian areas. Continued research and cooperation among federal, state, Tribes, and the private sector should improve/maintain acceptable riparian area conditions. Best Management Practices setting measurable standards and the identification and protection of unstable areas would further help maintain water quality. Monitoring, using measurable standards, is the key feedback mechanism for BMP implementation, effectiveness, and cumulative effects analysis.

D. Air Quality. How should BLM address the use of prescribed fire as a forest management tool in terms of the potential impacts on air quality?

The State supports a balanced ecological strategy for managing forests in Oregon. An ecological approach to forest management may entail a greater use of prescribed burning. If prescribed fire is going to be utilized by BLM as a forest management tool, state and federal air quality requirements must also continue to be met.

The draft BLM plans have stated that prescribed burning will be done in accordance with the Oregon State Implementation Plan administered by DEQ and the Oregon Smoke Management Plan (OSMP) administered by the Oregon Department of Forestry. Incorporated into the OSMP is a goal for reducing emissions from prescribed burning by 50 percent by the year 2000.

1. PM10 Nonattainment Areas

Prescribed forest burning and wildfires in west-side districts can affect air quality in both western and parts of central Oregon. Of particular concern are areas which do not meet state and federal health standards for small particulate matter (PM10). Currently these areas are Medford-Ashland, Klamath Falls, Grants Pass, Eugene-Springfield, and Oakridge.

Although prescribed burning is not a significant contributor to PM10 levels in the areas noted above, there is still a need to minimize smoke impacts, in order to ensure that air quality standards are attained by the federal deadlines specified in the Clean Air Act. DEQ has developed PM10 burning smoke impacts in these areas. The Department of Forestry's OSMP is directly tied into these PM10 control strategies.

2. Prevention of Significant Deterioration

The State is also concerned about maintaining clean air in areas currently meeting air quality standards. Contributing prescribed burning impacts could aggravate PM10 levels in these areas leading to the nonattainment designation and development of control strategies as discussed above. In addition, the federal Clean Air Act contains pollution limits known as Prevention of Significant Deterioration Increments which limit the amount of emissions that can be added to a "clean" airshed. If the allowed deterioration increment is consumed, then further growth must be restricted, such as new and modified major industrial sources of pollution.

3. Visibility Protection

The State recognizes the importance of protecting federal Class I areas (wilderness areas and Crater Lake National Park) from smoke impacts as a result of BLM prescribed burning in western Oregon. The federal Clean Air Act requires states to improve visibility in these Class I areas. Air quality monitoring in the Cascades has shown a 65-75 percent improvement in visibility in recent years. The Oregon Visibility Plan, developed by DEQ in 1986, is largely responsible for this progress and is closely linked to the OSMP.

4. Summary

The State believes that the final BLM plans should specifically address each of the three issues outlined above in cases where smoke impacts from prescribed burning could potentially occur. Any increases in prescribed burning including "understory" burning should be analyzed from an air quality standpoint.

In addition, the recent emergence of the forest health problems in central and eastern Oregon may expand the role of natural and prescribed burning on some of the forested land administered by BLM. The extent to which this could occur needs to be assessed prior to the start of any increased burning to ensure consistency with the Oregon's State Implementation Plan and OSMP. Continued coordination and communication among federal and state agencies in addressing these air quality concerns should be stressed.

E. Tourism and Recreation. How should BLM manage for recreation, visual resources, and Wild and Scenic Rivers?

BLM lands contain a variety of significant natural resources of recreational value, including wildlife, wilderness, lakes, and rivers. These resources have existing and potential values for local residents and also serve as an attraction for tourism from outside a specific BLM district.

As Oregon's and the nation's population grows, the demand also grows for tourist attractions and outdoor recreation. At the same time, the State, in an effort to expand its economic base and to mitigate the cyclical nature of an economy heavily dependent upon timber and agriculture, increasingly emphasizes tourism, recreation, and the service industries which accompany them. Any long-range plan for BLM lands in Oregon should give more weight to diversified use of these lands if Oregon is to have balanced growth.

The State has addressed recreation uses and needs through statutes and state land use planning goals. The Oregon State Comprehensive Outdoor Recreation Plan (SCORP), with the Oregon Outdoor Recreation Plan 1988-1993 and the Recreational Supply Bulletin and Recreational Needs Bulletin, provide comprehensive technical information and assessments for analyzing recreational growth and needs throughout the state. Furthermore, the State's recreation paper (Appendix 1), titled Recreation on BLM lands - State Position Paper, presents recommendations on improving recreational and tourism opportunities on BLM lands. We encourage districts to incorporate the State's recommendations and technical expertise when developing their final RMPs/EISs.

1. Recreational Tourism

Many proposed recreational developments and management actions have direct impacts on the future of recreational tourism in Oregon. Several of these actions which BLM should consider in its final plans include:

a. Coordination with State and local governments on actions which may influence our Regional Strategies and Community Initiatives Programs.

b. Development of a multiple-agency recreation planning program to promote regional recreational development and tourism.

The development of recreational/tourism strategies by State and federal governments and the private sector is one essential component of Oregon's plan to diversify its economy.

2. Dispersed Recreational Demand

The 1988 SCORP projects demand for a variety of dispersed recreational activities. As identified in this document, merely considering activity demand is insufficient to address recreational diversity. Equally important is to consider the desired characteristics of the setting for a given activity. Those characteristics in SCORP have been defined in terms of the Recreational Opportunity Spectrum (ROS).

The Klamath Falls Resource Area was the only plan which recognized ROS to identify recreational opportunities. We commend them on this effort and recommend that the five westside BLM districts incorporate this rating into their final plans.

The SCORP analysis has identified a need to supply more "primitive" and "semiprimitive" recreational opportunities. While it may be difficult to furnish this specific kind of recreational setting because of BLM's checkerboard ownership, Special Recreational Management Areas, Areas of Critical Environmental Concern, Outstanding Natural Areas, Research Natural Areas, scenic areas, plus other special sites may possess some of the characteristics needed for "primitive" and semiprimitive recreation. The State encourages districts, where appropriate, to use the ROS to identify "primitive" and "semiprimitive" recreational opportunities.

3. Wilderness

Soda Mountain Wilderness Study Area. -- BLM completed its Record of Decision for the Oregon wilderness study areas in October 1991. BLM's final decision package, which must be approved by Congress, recommended that 49 study areas encompassing 1.3 million acres be designated as wilderness. All but three of the wilderness study areas (two are islands) are located east of the Cascade Mountains.

Soda Mountain is the only mainland BLM study area recommended for wilderness west of the Cascades. Located in the Ashland Resource Area of the Medford District, it encompass some 5,895 acres of which 5,867 acres are being proposed for wilderness.

Soda Mountain - Pilot Rock area is an extremely unique transition zone where coastal, high desert, Cascades and Sierra ecosystems converge. Because of its geographic location and geologic history, many plant and animal species, not found anywhere else in Oregon, have become established. Soda Mountain also provides an important habitat for summering and wintering big game with much of the area identified as a "Designated Conservation Area" by the U.S. Fish and Wildlife Service in the Draft Recovery Plan for the Northern Spotted Owl.

Ever since BLM began evaluating sites for wilderness consideration, there has been strong public interest in expanding the Soda Mountain area. The Governor's Forest Planning Team visited Soda Mountain earlier this year to get a first-hand look at the area and discuss its status with local citizens and BLM.

Since the area is ecologically unique and due to a strong interest by the public, the State recommends that the proposed boundaries of BLM's Soda Mountain wilderness be further evaluated to determine if additional land should be wilderness beyond what has been recommended in BLM's Wilderness Study Report -- Record of Decision. This evaluation should be conducted before final legislation is drafted for Congressional approval. BLM is

encouraged to carefully manage the entire area of public interest, outside of BLM's proposed WSA boundary, in order to protect its current ecological values and suitability for wilderness.

4. Trails

The draft plans propose significant additions to recreational trails on BLM lands. The State supports this direction especially for those trails linking recreational sites, those allowing access to Special Recreation Management Areas, and those providing connectors to other recreational trails.

The State encourages each BLM district/Klamath Falls Resource Area to review recommendations for trail management in our recreation paper (Appendix 1). Some of the recommendations noted in the paper include: develop trail plans within each proposed project area, buffering, appropriate signing, rerouting, and implementing silvicultural practices to mitigate impacts. We urge that these recommendations be considered in the final plans.

5. Developed Recreation Sites

The preferred alternatives propose substantial increases in camping and day-use sites, in many cases more than doubling current provisions. We are very supportive of this increased emphasis. High priority for such development should be given to those sites supporting local recreational and tourism strategies.

6. Wild and Scenic Rivers

The State gives a high priority to the Federal Wild and Scenic River program. It, along with the State Scenic Waterways program, is critical in maintaining the natural resource and recreational values on Oregon's waters.

The following concerns have surfaced with all of the draft plans:

a. The draft plans do not make it clear whether federal land management actions that potentially could have impacts on designated waterways in the State system will be coordinated with the State.

b. Technical procedures for determining river suitability were not sufficiently explained in the draft plans. Issues include percent of land ownership by BLM; the criterion used for ranking rivers as suitable; use of "Outstandingly Remarkable Values" (ORV) in rating; and use of economic costs and local support criterion.

Given the considerations noted above, the State believes that the methodologies used to determine suitability of wild and scenic rivers should be reviewed in preparing the final plans. We recognize that all the rivers found eligible are not necessarily suitable. But we believe that the current method used by BLM may not be adequate for making that determination.

Criteria that BLM districts should consider when analyzing suitability of rivers should include:

a. Aggregated values of a given stream.

b. Importance of aggregated values on both a statewide and SCORP regional level.

c. Importance of smaller streams to program.

d. Non-local as well as local support for a given stream.

Visual management on scenic rivers is best determined through the river planning process. This provides for comprehensive development of management standards for all values appropriate to a given river. Such standards should be based on the identified ORVs regardless of river designation. In terms of visual resource management, the State recommends the following management/protection standards:

a. No scheduled harvest (visual resource management I) in river corridors, under its administration, designated as wild.

b. Rivers or segments of rivers designated as scenic should be managed to maintain and provide recreation opportunities in a near-natural setting. While silvicultural practices could occur within the 1/4 mile corridor, these practices should not substantially impact the river or its immediate environment. Where scenic is an ORV currently meeting visual resource management (VRM) I, maintain the visual quality; likewise, where VRM II exists maintain and protect its scenic value. When VRM III exists, BLM should attempt to enhance visual quality to VRM II.

c. River or segments of rivers designated as recreational should be managed to maintain ORVs for which they are designated while providing river-related recreational opportunities in a recreational setting. On rivers where scenic or recreation is identified as the ORV, standards should be implemented which would protect and enhance existing scenic conditions.

8. Scenic Highways

The public's perception of how BLM lands (and other ownerships) are managed is in many cases determined by what people see as they travel the highways and hike the trails. This is a major reason for maintaining visual quality along roads, trails, developed recreational areas and other visually sensitive sites.

Scenic quality contributes to the increasing tourist industry in western Oregon. Hundreds of miles of State highways run through BLM-administered lands. Highways 22, 26, 34, 38, 42, 62, 126, 138, 140, 199, and Interstate 5 are just a few of the routes passing through BLM lands that are used by Oregonians and out-of-state visitors. With this in mind, BLM districts should carefully consider scenic quality in their RMPs/EISs.

It is recognized that maintaining continuity in visual quality on BLM lands is somewhat complicated by its checkerboard ownership. In many cases adjacent ownerships are intensively managing their resources without a high degree of visual quality in mind. This, however, has changed as revisions to the Oregon Forest Practices Act rules (ORS 527.630 Sections 10 and 17) have set visual standards and identified specific highways for visual protection. Visual quality most likely would be enhanced if the six draft plans preferred alternatives were implemented.

BLM's draft plans have classified and are proposing visual protection standards for many sensitive areas: ACECs; SRMA; Wild and Scenic Rivers -- McKenzie and Rogue; travel corridors -- Mt. Hood Corridor, I-5, Marys Peak Road, plus other recreational sites. The State supports the visual protection of sites presented in the preferred alternatives, and suggest BLM provide adequate visual protection along other visually sensitive highways.

The State recommends the following regarding visual quality:

a. BLM districts should more precisely inventory and reevaluate their visual protection recommendations in the final plans for major highways that pass through BLM lands. The analysis should identify those highways or highway segments appropriate for visual management. Existing visual conditions along these highways should be described, as well as the directives to develop management plans to achieve expected future conditions.

b. Scenic values along the major highways, cited above, should not fall below visual resource management (VRM) Class III. The State believes that VRM Class IV (modification) would not retain the visual quality objectives along these important travel corridors. The application of new silvicultural concepts by BLM may help mitigate visual concerns.

c. Long-term visual management objectives should consider the use of silvicultural practices (e.g., uneven-aged management or underburning) in order to accomplish the VRM objectives.

d. BLM should work with adjacent landowners and others to maintain visual continuity.

The State supports BLM's Backcountry Byway Program.

We also support Salem District's special protection for the Mt. Hood Highway corridor including land exchanges to promote visual quality.

With an increased interest in driving-for-pleasure, these designated routes will give the public sightseeing and wildlife viewing opportunities on lands administered by BLM.

9. Technical Issues

a. Estimates of Recreational Use

We understand that BLM does not currently estimate recreational use on lands under its jurisdiction. Therefore it used activity occasions derived from SCORP, adjusted based on BLM's proportional forested recreational land base for this planning period. We concur with this methodology, but urge BLM to develop methods of use estimates more appropriate to BLM lands in the future.

b. Economic Valuations of Recreation

Analysis of the economic benefits of recreation use should be developed with values appropriate to BLM lands. For example, we understand current methodologies do not place economic values on recreational activities occurring within a BLM district produced by residents within that district. This would miss the transfer payments of recreation produced by a resident of one county recreating in another county. We urge that current recreational economic methodologies be reconsidered so the full value of recreation can be described in the final RMPs.

F. Timber Management. Are BLM's timber growth and yield assumptions valid? How will silvicultural practices be used to support projected harvest levels? Will BLM be able to produce the harvest levels predicted by land allocation? Has BLM adequately address forest health?

Timber harvest from lands administered by BLM has been and will continue to be a major source of logs available to local mills throughout Oregon. Over the last ten years, 11 percent of the total volume harvested in Oregon has come from BLM lands. In 1991, over 486 million board feet was harvested from Bureau lands which represents eight percent of the total volume harvested statewide. Forest management activities not only furnish jobs for local economies but also are an important revenue source for counties to support schools and roads.

BLM's legal mandate for managing its lands has come from the O&C Act and the Forest Land Policy and Management Act. These laws, which were discussed in the Ecosystem Management section of this paper, directly address the management of lands administered by BLM. The O&C lands have been intensively managed over the last fifty years as directed by congressional mandate. Public Domain lands administered under the Forest Land Policy and Management Act consider more multiple use policies.

1. Forest Land Management

Under the current plans, forest management entails implementing mainly even-aged management (clear-cutting) followed by the application of intensive management practices (e.g.,burning, planting, fertilization, thinnings, and controlling competing vegetation) on short rotations (40-60 years). The primary objective is to intensively manage forest stands to reestablish and perpetuate the growth of Douglas-fir/hemlock stands on a sustained yield basis. Other species are favored depending upon the ecoregion within districts.

Implementation of this strategy represented accepted forest management practices for managing western Oregon forests in the past. Recently, however, these practices have been questioned due to air and water quality problems and protection of sensitive, threatened, and endangered species plus other concerns. This has required BLM and other forest landowners to reassess their approaches to resource management.

In the draft plans, BLM is proposing to meet this challenge by adopting an ecosystem approach to forest management known as biological diversity. Biological diversity represents a significant change from BLM's current management philosophy. While there are questions about the legal sufficiency of this new strategy in meeting the O&C Act, the State believes that biological diversity goes a long way toward addressing concerns about forest health and maintaining productive ecosystems.

The preferred alternatives are designed to produce mature and older forests over time. Because less older forests will be provided on adjacent private lands, we are concerned that the checkerboard ownership pattern makes it unlikely that the objectives for management will be achieved. In order to produce the desired future condition of major forest areas, nearly complete watershed-level ownership is necessary.

A variety of techniques have been used to provide older age class forest. Old Growth Emphasis Areas (OGEAs) 1's use 300 year rotations and density management to accelerate older forest characteristics. Connective Areas (CAs) are managed using 150- or 200-year rotations. Due to the numbers of overstory leave trees planned, we anticipate that management in the General Forest management area will produce characteristics similar to older stands for about 2/3's of the rotation. BLM's efforts are innovative in that they attempt to maintain spotted owl habitat over time while still producing timber from the same land. This strategy is not without controversy, however, as concerns have been expressed over the sufficiency of this strategy to maintain dispersal habitat for spotted owls. (Note wildlife management section of this coordinated response for a further discussion.)

The Medford District has divided its planning area into southern and northern management units based on site productivity, plant community, and forest condition. Proposed forest management prescriptions have been tailored to each area to better fit conditions on the ground. Variations in conventional forest management practices are also being proposed in frost-prone areas. The State compliments the district for this effort.

Implementation of uneven-aged management, especially in the Klamath Falls Resource Area's ponderosa pine and pine-associated stands, is also supported by the State. Both the Medford District and Klamath Falls Resource Area mention using uneven-aged management as a silvicultural management tool. A more comprehensive explanation would be helpful on how these, and possibly other districts, will implement uneven-aged management and how this differs from the various green tree retention standards being proposed in the preferred alternatives.

Our concern, which will be reiterated again in following sections, is the uncertain outcome of applying untested silvicultural prescriptions through biological diversity. It will take highly trained professionals to implement and monitor biological diversity to determine if the program is successful in meeting each district's (including western Oregon as a whole) expected objectives.

Adequate funding is necessary for a successful program. BLM is proposing a much higher level of intensive management (e.g., more genetic plantings and pruning) than ever before. Historically, monies have not been available for intensive management programs. Furthermore, timber receipts have been used to fund many of the activities. We question how BLM intends to obtain the necessary funds to implement biological diversity with reduced harvest levels and higher predicted costs. BLM should evaluate the possible impacts on management programs and outputs (e.g., allowable sales quantity) of lower funding levels.

We direct your attention to the Department of Forestry's response (Appendix 2) and Oregon State University's Report (Appendix 3) for more detailed comments specific to individual BLM districts/resource area.

2. Land Suitability

BLM districts have inventoried their lands by using a system known as the Timber Production Classification System (TPCC). GIS mapping has helped identify the various TPCC classifications. According to the draft plans, this inventory identified the physical and biological capabilities of the lands to support and produce forest products on a sustained yield. Some 2 million acres were identified as suitable in western Oregon/Klamath Falls Resource Area of which 1.7 million acres would be managed for varying degrees of timber harvest. Less than 1 million acres would be allocated to general forest under the six preferred alternatives. Other land allocations (e.g., Old Growth Emphasis and Connectivity areas) would allow less intensive timber production as compared to the general forest allocation.

The State recommends that BLM, using data obtained from the Forest Intensified Research project, Department of Forestry, and other studies, continue to validate the accuracy of data obtained from its inventory program and further evaluate lands currently determined to be unsuitable. If it can be determined that some of these lands can be managed for timber production, they should be returned to the suitable base. Likewise, lands in the suitable base which are determined to be unsuitable through monitoring, should be taken out of the base.

Comments regarding BLM's TPCC inventory system are found in Appendix 3 -- Oregon State University's Report (page 43).

3. Growth and Yield Assumptions

Estimation of the sustainable yield level is highly dependent upon a number of assumptions regarding land bases, timber inventory, management activities, and growth and yield assumptions. If the assumptions are not correct, one may find in the decades ahead that either the harvest level was not sustainable or that the harvest level was less than could have been realized.

The allowable sales quantity (ASQ) on each BLM district was calculated using a computer program named TRIM-PLUS. Districts used a combination of two growth and yield models (Stand Projection System -- SPS and ORGANON) for estimating future yields from managed forest stands.

Several questions have been raised regarding BLM's extensive inventory system including sampling selection, unit design, and intensity methods. Concerns have also been expressed regarding BLM application of SPS (an even-aged Douglas-fir or western hemlock calibrated model), to stands where green trees will be maintained.

Some of the draft plans noted that the preferred alternative includes many elements which are recognized to be substantially untested modeling of sustained yield as compared to other alternatives presented. It is further noted that the level of confidence in yield and harvest values is lower than other alternatives.

The State is concerned that ASQ levels predicted in the draft plans may be inflated estimates of the actual volume that can be expected. Questions regarding inventory design, site index equations, volume and taper equations, growth and yield from intensive management practices, minimum harvest ages, and empirical yield tables need to be discussed in more detail in BLM's final plan. Further analysis should also be conducted on the allowable cut effect of deferring for 80 years some of the OGEAs even though they remain in the timber base.

The State would direct BLM's attention to Oregon State University's Report on growth and yield in Appendix 3.

4. Forest Health

Deteriorating forest health conditions can be visually detected as one travels in eastern Oregon. Forest health is also a serious concern in western Oregon forests where insect and disease mortality is very common. Forest health conditions influence the amount of timber yield sustained over time, the ability to maintain critical fish and wildlife habitat, and the maintenance and development of recreation opportunities on all forest lands regardless of ownership.

BLM's draft plans fail to adequately address forest health issues which have recently received both public and political attention. In most of the plans, forest health is not mentioned in the goals or objectives of the proposed management alternatives. Medford and Klamath Falls draft plans come the closest to addressing health problems and solutions.

The State recommends that BLM's final plans set specific goals and objectives including monitoring detailing how management strategies of the preferred alternatives will address forest health problems and what mitigative measures will be implemented to improve unhealthy forest conditions on BLM lands. We encourage BLM to work with other forest landowners to improve forest health.

5. Timber Supply

The primary driver of BLM's socio-economic analysis is timber supply. BLM used an innovative approach to model timber supply. This approach has much merit. However, some basic assumptions need to be revisited and the analysis for the final plans should reflect a more uncertain picture of timber supply in Oregon. In addition, BLM should explain how the timber supply analysis was used in formulating its draft alternatives and how it will be used in formulating the record of decision. Please review the Department of Forestry's draft response found in Appendix 2 for more details.

A summary of the concerns and recommendations regarding timber supply include:

a. Due to the uncertainty in timber supply, it is reasonable to assume that stumpage prices will increase substantially more than has been predicted in the draft plans. We encourage BLM to reevaluate the stumpage prices used in its analysis to better align them with current projections.

b. Overall, analysis of the timber supply situation is more optimistic than warranted. The draft plans portray what is likely to be an upper level of timber supply. Additional scenarios should be portrayed reflecting lower potential harvests from private owners, the Forest Service, and forests managed by the Oregon Department of Forestry. Uncertainty about the probability of implementing planned BLM timber sale levels should also be documented.

c. The public's sensitivity toward harvesting younger stands (50-60 years) of timber may force BLM to reconsider later decadal management regimes. Current restrictions on federal lands have caused increased harvesting of smaller diameter logs on private lands. This may translate into longer rotations on BLM lands than would otherwise be the case. BLM should evaluate the effects of longer rotations and higher minimum harvest ages on all lands managed by BLM.

d. Timber sale quantities are highly dependent upon intensive management activities yet, historically, BLM management activity accomplishments are well below planned levels.

Levels of management practices on BLM forest lands are dependent upon levels of federal funding. These appropriated funds have, most of the time, been sufficient to insure adequate regeneration of cutover stands but have often been insufficient to take advantage of opportunities to significantly increase growth levels of the Bureau's Oregon forest lands. Planning for socio-economic impacts of projected timber supply levels should consider the unstable

nature of federal funding of forest management activities and the difficulties of securing funding for these activities over the next several decades.

e. Timber supply is the primary driver of the BLM socio-economic analysis but does not appear to be an important part of alternative formulation in the draft plans. One would have expected BLM to use this analysis as an integral part of developing plan alternatives; the potential exists to use the analysis as a key decision criterion for the record of decision.

f. The Bureau appears to have used a harvest flow constraint know as Sequential NonDeclining Yield. The basic concept is to find a harvest level that can be sustained over time. This process is a fairly rational approach to regulation when trying to balance stability goals with forest regulation goals. BLM did not do any sensitivity analyses on alternative flow constraints. In light of concerns for community stability, BLM might want to present a "departure alternative" in its final plan.

G. Wildlife Management. How should BLM districts manage for big game? What snag levels should BLM provide for cavity-dependent birds and other wildlife? How should sensitive, threatened and endangered wildlife species be managed?

1. Deer and Elk Habitat

Big game is an extremely important resource which depends on cover and forage found on BLM administered lands. Big game provides recreation to the public in the form of hunting and viewing opportunities. The Dean's Creek Elk Viewing area is an example of BLM's commitment, in coordination with the State, to develop an interpretive roadside program for elk and other wildlife.

BLM districts have appropriately utilized the Wisdom Model in determining big game habitat conditions. However, BLM has not stated how it would improve habitat effectiveness (HE) for big game in areas with low HE indices.

a. Cover

Cover is one of the critical components that needs to be available on BLM lands if management objectives (i.e., HE indices and number of animals) set by the Oregon Department of Fish and Wildlife (ODFW) are to be achieved. Cover, which includes the subcategories of optimal, thermal, and hiding cover, has been evaluated in the draft BLM plans. Existing cover conditions were rated as marginal in most of the elk management emphasis areas.

The reason given for these marginal conditions is past forest management practices on BLM and adjacent private lands. Under their preferred alternatives, BLM districts are predicting no change in the short term for cover conditions. Cover conditions would improve in the long-term in the OGEAs but would remain marginal in the general forest area. The State is concerned about long-term marginal conditions in the general forest.

The final RMPs should address how BLM proposes to improve marginal cover conditions and to meet HE and herd number objectives. BLM should work with ODFW on meeting these management objectives.

b. Forage

Forage quality and availability are also important elements necessary for big game survival. Like cover, BLM draft plans indicate marginal current conditions in most of the emphasis areas/analytical watersheds. Lack of forage or poor forage quality has led to deer and elk migrating onto private lands thus leading to land use conflicts. BLM districts have mentioned the use of forage seeding on harvested units and road rights-of-way. Coos Bay, in particular, is planning to seed up to 50 percent of the acres harvested each year.

BLM districts should consider the following recommendations on forage in their final plans:

(1) The final RMPs should address how BLM proposes to improve marginal forage conditions and to meet State HE and herd number objectives. BLM should work with ODFW on meeting these management objectives.

(2) Expand, where feasible, the forage seeding programs to benefit big game. BLM should increase its effort to search out and/or create native grass and legume seed sources for forage seedings palatable to big game species.

(3) BLM should fund forage seeding through timber sale receipts.

(4) BLM districts, in particular the Klamath Falls Resource Area, should structure grazing allotment plans to mitigate forage conflicts that may arise between livestock and big game. Alternatives such as shortening livestock grazing periods in the fall to allow green-up for winter forage may be helpful in defusing forage problems.

c. Roads

A plan to manage roads in a responsible manner is perhaps the most powerful management tool BLM has to benefit big game in western Oregon. Open roads allow easy access to big game herds

and other wildlife. This accessibility has exposed deer and elk to greater human-caused disturbances. Big game must expend more energy to seek hiding cover from hunters and others when open road densities are high.

Open-road densities exceeding 4 miles/square mile are common on all of the BLM districts. Declines in big game habitat caused by a high density of open roads has been well documented. We direct your attention to the roads management section, Appendix 1.

2. Snags and Dead-and-Downed Wood

Dead and down woody material is increasingly recognized as an important component of the forest ecosystem. BLM should provide enough "wildlife trees" to maintain viable populations of birds and other wildlife. Additional steps should be taken to ensure the development of snags over time.

Green trees should be left on regeneration units to provide future snags. BLM districts are commended for proposing to leave 6-20 green trees per acre. However, residual green trees left on harvest units may not be long lived or may blow down such that snags may be unavailable in the future. Thus, it may be necessary to girdle or blast out the tops of some of these trees over time in order to produce snags to support desired population levels.

BLM should have concrete proposals to create snags including estimated budgets and work-month requirements. BLM should also adjust ASQs to account for these created snags over time. BLM should fund research to determine whether artificially created snags have the same utility for wildlife as those produced naturally.

The State supports BLM's proposals for retention of dead-and-downed wood. Where feasible, BLM should provide downed logs greater than 24" diameter at a minimum rate of 2/acre. BLM should include the retention of target levels of dead-and-downed wood in contract stipulations for planned timber sales. BLM should establish a monitoring system to ensure that target levels are attained.

3. Sensitive, Threatened and Endangered Species

a. Spotted Owl

The northern spotted owl was listed as a threatened species on June 26, 1990 as it was determined that declining habitat conditions were leading to possible extinction. Several conservation strategies have been developed, most notably the Interagency Scientific Committee's (ISC) Report and the Draft Recovery Plan, to address the northern spotted owl's recovery.

A Recovery Team was appointed by Secretary of the Interior Lujan to develop a recovery plan that would consider the habitat for the spotted owl and other species plus the economic effects of implementing a recovery plan. The State has a member on the 18-person Northern Spotted Owl Recovery Team and has contributed support, from several State agencies, to the process.

BLM's draft preferred alternatives propose to address spotted owls and other critical species through application of ecosystem management principles. The overall intent of this strategy according to BLM is: "To manage lands to contribute to community stability consistent with maintenance of ecosystems and a diversity of species; contribute to long-term recovery of the northern spotted owl; and maintain fish and wildlife and recreation, scenic and other resources." The objective is to maintain many of the old growth/mature forest components necessary for the spotted owl and other species while permitting the production of a certain level of goods and services on lands available for timber harvest.

As noted in the Old Growth and Mature Forest section of this coordinated response, districts have taken various approaches to maintaining and producing mature/old growth stand conditions. The concepts revolve around creating Old Growth Emphasis Areas (OGEAs) and Connectivity Areas (CAs) and Klamath Falls Resources Area's Protected Habitat Areas (PHAs) scattered throughout the districts.

BLM's Salem District has identified three classes of OGEAs and two types of CAs in an effort to maintain/create older forest structure. The preferred alternative strategy for OGEA 2 (Nestucca block) is calling for more intensive management than in OGEA 1 blocks. Due to the current stand structure existing in the Nestucca block, there is a need to accelerate older forest conditions. While this need is recognized, there is a concern that the management scenario being proposed is untested and possibly too aggressive thus it may not meet the intent of the spotted owl recovery plan. The Governor's Planning Team and state agencies recently visited the site with BLM resource area managers to discuss proposed management prescriptions under the preferred alternative.

Other concerns have also surfaced regarding the retention of existing stands of old growth and whether or not BLM's older forest strategy will be sufficient to meet dispersal habitat needs of the spotted owl. Furthermore, BLM has not done a risk analysis and developed contingency plans for OGEAs and CAs that potentially could be destroyed by a catastrophic event.

The effectiveness of CAs as corridors for wildlife movement has not been adequately addressed in the draft plans. Some of the factors that may affect the utility of these areas include: their

width, current fragmentation of habitat within the corridors, the effect of timber harvest on current and future habitat mosaics including anticipated patch size, land ownership pattern, and different dispersal needs of wildlife. BLM should address these factors in their final plans.

Intensive management of the forest landscape has created the current stand conditions that exist today. To reach conditions we desire in the future may require some manipulation (less intensive than in the past) of forest stands to hasten old growth/mature forest conditions.

It is the responsibility of the US Fish and Wildlife Service to determine whether BLM plans comply with the Endangered Species Act. The State supports the general principles and overall approach taken in the Draft Recovery Plan for the Spotted Owl as a means toward resolving the present impasse. The Final Recovery Plan for the Northern Spotted Owl, due to be released in 1993, should be adopted by BLM unless the U.S. Fish and Wildlife Service determines that BLM's land management strategy is adequate for protecting the spotted owl.

b. Bald Eagle

The State concludes that the implementation guidelines for the bald eagle recovery plan have been met by the districts. However, ODFW is specifically concerned about the bald eagle roosting area in the Scappoose block which has apparently received no special protection in the Salem draft RMP. We would ask BLM to contact ODFW regarding this specific bald eagle site.

c. Marbled Murrelet

With the recent listing of the marbled murrelet as a threatened species under the Endangered Species Act, BLM must provide an in-depth analysis of the effects of the alternatives on this species. The definition for suitable habitat as currently used by BLM must be further refined to reflect the latest scientific information. From an operational context, the State recommends that BLM expand murrelet inventories and take interim measures to protect suitable habitat.

d. Other Sensitive Wildlife Species

Additional concerns have been expressed by ODFW and others on populations of other Oregon sensitive species (e.g., neotropical migrant birds) that may be impacted by BLM preferred alternatives. This concern especially applies to the general forest management area where the impacts of timber harvesting on these species may be severe, but applies to other allocations as well. The final RMPs need to provide clear direction for site-specific protection of these species including information on protection of nest sites and other important habitat areas. BLM should take no action which would contribute to the listing of sensitive species. BLM should inventory sensitive species occurring on their lands, mitigate impacts on sensitive species resulting from management actions, and monitor to assess the impacts of actions on sensitive species.

H. Old Growth and Mature Forest. How will BLM manage its forests to maintain old growth and mature forest composition?

When people think of forests, they may envision majestic old growth. These old growth stands provide habitat for many wildlife species and furnish a variety of recreational experiences.

Old growth is also still important to the timber industry. Because of its size and the quality of the wood, these trees are especially prized by industry.

According to the BLM's 1988 extensive stand inventory, there are over 290,000 acres of existing old growth (200 year old) in the western Oregon districts. While various land allocations being proposed in each district's preferred alternative set-aside some of these stands (e.g., Special Areas, wild and scenic river corridors, riparian areas, and wildlife habitat) many old growth stands would remain in the general forest allocation. According to the draft plans' preferred alternatives, some 40,000 acres of old growth in total would be harvested in the first decade of plans.

BLM districts are proposing several different techniques to maintain/produce older-aged forests. OGEAs 1's use 300 year rotations and density management to accelerate older forest characteristics. CAs are managed using 150- or 200-year rotations. Klamath Falls Resource Area's preferred alternative calls for a system of 80-100 acre protected habitat areas each surrounded by a 1/4 mile buffer to maintain old growth in the western portion of their resource area. Residual trees (6-20 depending upon the land allocation) and other old growth components (snags and downed woody material) are to be left on units within the general forest allocation or nondeferred OGEAs and CAs.

BLM's biological diversity proposal is innovative but untested in that it will attempt to maintain old growth characteristics for species such as the spotted owl while still producing timber. According to the BLM's Executive Summary, 324,000 acres of old growth would be remaining after 10 years; 475,000 acres after 100 years would be considered old growth. This would be an alleged increase in total acres from the current inventory of 290,000 acres.

While the State supports BLM's approach to maintaining and protecting old growth stands through biological diversity, we are concerned about the impact that harvesting will have on old growth dependent species. We further realize that the harvest from these stands represent the most predictable portion of the allowable sales quantity in these uncertain times of timber supply.

The State's concern focuses on BLM's proposed harvest of old growth in the general forest allocation for the preferred alternatives. More specifically, there is currently a shortfall of biological diversity opportunities existing in the Coast Range due to human and natural disturbances. Most watersheds in the Eugene, Salem and Coos Bay Districts lack older-aged components necessary to maintain ecosystem management. Harvesting of old growth within the general forest allocation will further exacerbate the problem unless mitigative measures are considered.

The State believes that one solution to this problem would be to maintain within each third-order watershed example(s) of ecologically significant older forest stands. These stands should represent PNW 447 criteria, or if no stands having these characteristics are present, include natural stands without significant salvage or thinning histories. Protection of such stands will offer refugia for associated wildlife species, and may allow them to expand their distribution and populations as younger stands in the surrounding area mature over time. Other possible solutions should also be analyzed in an effort to address this concern.

The State recommends that BLM further evaluate the impacts on biological diversity (genetic, species, ecosystem, landscape) in the Coast Range from harvesting old growth in the general forest allocation in the preferred alternatives. BLM should further develop and analyze other alternatives which retain biologically significant old growth stands while still producing economic opportunities. Conceptually, Alternative E's old growth strategy could act as a benchmark for other alternatives regarding old growth retention.

I. Livestock Management. How will BLM manage its grazing lands to produce forage for livestock and wildlife while protecting other resource values, in particular riparian areas?

Ranches located near land administered by BLM and the Forest Service, in many cases, depend upon livestock grazing from these lands. Historically, nearby cattle ranching operations use public lands as summer pasture and utilize home ranches to grow irrigated hay for winter feed. Declines in livestock forage from the BLM could have an effect on local ranches. A decline in the economic stability of local ranches would create economic hardship on the communities in the surrounding area.

The State's recommendations outlined below recognize the economic and cultural facets of the livestock industry by proposing a program that we believe will ensure the long run, sustainable use of BLM lands by livestock while protecting sensitive resource values located on these lands. Most western Oregon BLM districts have limited grazing programs on their lands, with the exception of Klamath Falls Resource Area. While most of the following comments and recommendations refer to the Klamath Falls Resource Area, they are also applicable to all BLM districts where grazing is permitted.

The Klamath Falls Resource Area currently has some 95 grazing allotments (81 permittees/lessees) producing 13,869 Animal Unit Months (AUMs) of forage annually. An additional 5,096 AUMs are classified as suspended non-use. According to the draft Klamath Falls RMP/EIS and personal communications with BLM staff, range managers (using a core team) have evaluated the impact of grazing on other resource values, especially streamside habitat and big game forage needs.

The Klamath Falls Resource Area has identified some 14 allotments in need of improvement. These allotments represent over 61 percent of the total allotted grazing acres on the east side and 28 percent on the west side. In total, this represents some 57 percent of the allocated AUMs.

Klamath Falls' draft preferred alternative proposes that 13,185 AUMs per year be available which represents a decline of 5 percent from the current level. Justification for the decrease is based upon a need to develop upland water developments, improved riparian area conditions and improve forage for both livestock and wildlife.

We have several concerns regarding livestock management. First, there seems to be a large number of allotments which lack comprehensive allotment management plans. Without a plan for each allotment, combined with an aggressive monitoring program, how can the Klamath Falls Resource Area hope to improve unsatisfactory conditions in allotments currently needing rehabilitation? Will allotments identified as (I) in the plan become high priority for improvements when funding is available? While the core team approach used to identify resource conflicts in allotments is a good start, it should not be considered a substitute for allotment managements plans. Without allotment management plans and monitoring, degradation of the very values the Klamath Falls Resource Area is trying to protect or maintain could continue unchecked.

Furthermore, the Klamath plan permits annual grazing in riparian areas with currently less than good conditions. BLM should not allow grazing in such degraded areas except under strictly controlled management. If BLM cannot document initial recovery, they should change their grazing strategy or consider no grazing until recovery is achieved. The Governor's Watershed Enhancement Board wants to promote cooperative projects between the BLM and private owners where riparian areas cross mixed ownerships.

The State is also concerned about livestock impacts on fish and wildlife, with special emphasis on the Lost River and Short-nosed Suckers, big game, sage grouse, and other riparian dependent species.

The State supports a livestock management program which allows grazing while protecting resource values (i.e., water quality and fish and wildlife habitat). Considering the need to more carefully control livestock grazing in riparian areas and improve forage conditions on several of the allotments, we believe the proposed short-term decline in AUMs seems justified. The State favors additional reduction of AUMs when resource degradation is apparent.

As part of the range management program BLM should:

1. Develop allotment management plans for every allotment.
2. Monitor allotment plans on a regular schedule.
3. Activate range improvement projects (seeding, water development, and prescribed burning) that will both increase forage productivity and draw livestock toward lands not currently grazed and away from those in poor condition.
4. Implement grazing systems such as seasonal use and deferred rotation grazing that better fit the livestock to the resource.
5. Attract livestock away from riparian areas by:
   - Developing other water sources
   - Placing salt blocks away from riparian areas
   - Planting other palatable vegetation
6. Limit livestock use in riparian areas to periods when forage and soils are most resilient and to uses determined by site-specific conditions.
7. Exclude livestock until the recovery of riparian area vegetation (to a good condition) is enough to allow managed grazing.

8. Maintain and protect streams in "good" condition; restore streams in "poor" condition.

9. Secure a stable funding source for livestock management program.

Short-term declines in AUMs may occur on specific sites, but production should stabilize and, perhaps, even increase over the long-run once stream and rangeland conditions improve and problems of redistribution and grazing administration are addressed successfully. Frequent monitoring of allotment plans, as proposed by BLM, will detect resource problems. Grazing strategies should then be adjusted where needed.

BLM already has one key to success for balancing forage use with the protection and rehabilitation of the resource base: the generally improving flow of information and ideas among its staff, the Forest Service, permittees, and other resource users.

Two other success factors in this effort are the rapport between BLM and most allotment holders, and the expert help available from local soil and water conservation districts and conservation groups. Several BLM sponsored grazing projects in eastern Oregon (e.g., Camp Creek) have shown that proper grazing management can support livestock while protecting other resources.

The State believes that local people continuing to work together in a cooperative spirit, watershed by watershed, will pay off in better resource management and an improved livestock economy.

J. Minerals and Energy. How should BLM recognize and manage its mineral and energy resources?

Mineral and energy resources can be found on many lands administered by BLM. These valuable resources may include leasable minerals (oil and gas), locatable minerals (gold and other precious metals) and salable minerals (rock and aggregate resources). The location/extent of mineral resources depends upon the physiographic region. BLM administers both mineral estate and split estate lands.

While districts have discussed mineral and energy resources in their draft plans it is difficult to determine the location of these resources. In particular, State-owned mineral rights underlying BLM surface ownership have not been identified.

The State makes the following recommendations to BLM regarding minerals and energy which should be considered when developing the final RMPs/EISs:

1. Each one of the final plans should: a) acknowledge any state-owned mineral rights (list legal descriptions); and b) preserve, whenever possible, access to existing valid mineral rights.

   At the very least, the State believes that the management of severed estates with state-owned mineral rights should be specifically addressed and that the management direction offer the greatest possible latitude to the State.

2. BLM districts should recognize energy and minerals as an important resource when making land management allocations. Land available for mineral and energy exploration and development should be kept at the highest level environmentally possible in the preferred alternatives. Decisions to withdraw lands should be based on an open analysis with proper accommodation of current environmental protection and reclamation requirements.

3. There is a need to better quantify the value of the resources and to factor the resource value into the BLM alternatives. Specifically, mineral withdrawals have been made without the benefit of a mineral inventory. Such an inventory should be conducted before withdrawals are recommended.

4. For all districts, the State encourages BLM to provide realistic opportunities for mineral exploration and development. Mining overlay zones and explicit standards and procedures to allow mining in other land allocations are viable mechanisms to use to mitigate conflicts.

While budgeting for mineral assessments has been a problem for BLM, the Department of Geology and Mineral Industries stands ready to assist districts in assessing the mineral potential on their lands.

K. Socio-economic. How will the adopted plan affect economic opportunities in surrounding communities? What impact will the plans have on socio-economic stability in the planning area and statewide?

The long-term socio-economic goals of Oregon's state government and its people are spelled out in Oregon Benchmarks: Setting Measurable Standards for Progress. The State recognizes the need to diversify its economy, particularly in nonmetropolitan areas. The plans as specified in the draft EISs are not inconsistent with this goal. However, without a coordinated policy response to the impacts of the proposed timber harvest reductions, the State's highest priority strategic planning goals (Key and Lead Benchmarks) in two major areas are put at substantial risk.

1. Economic Benchmarks -- the goal of reaching the national average in per capita income particularly for regions outside of Portland metropolitan area and regional job distribution are severely impacted by the preferred alternatives.

2. Social Benchmark (specified as Benchmarks for People) -- achievement of goals relating to drug use, social harmony and job skills are adversely impacted by the structural economic change which will result from the preferred alternatives.

The State calls on BLM to provide the analytical ground work for an effective policy response to the fundamental social and economic changes which would follow the implementation of the preferred alternatives.

The economic and social conditions throughout Oregon are a major concern for the State. The management decisions taken on federal lands affect the economic and social welfare not only in nearby communities, but also the State as a whole.

Lands administered by BLM in western Oregon make a significant contribution to the economy of Oregon. State and local governments receive monies from management activities (mostly timber harvest) on BLM lands. BLM manages both Public Domain and Oregon and California (O&C)lands. Some 50 percent of revenues generated by timber receipts on O&C lands is given to western Oregon counties.

Many Oregon counties are very dependent upon revenues from federal lands which help finance schools, roads and local government. Douglas County, for example, derives over 60 percent of its revenue from BLM and Forest Service timber receipts; Josephine County, 16 percent; and Coos County, 14 percent. In 1991 alone, Oregon counties received some $90 million from timber receipts from O&C lands. The five-year average (1983-1988) of O&C payments to counties was $61 million a year.

Other direct revenue payments are also generated from the management of BLM lands. These revenues include mineral and grazing leases and in lieu of tax (public domain lands only) payments. Recreation (fishing, hunting, other recreational activities) on these lands also generates indirect revenues to local communities.

Declining timber harvests over the last two years have meant increased unemployment in timber-dependent communities throughout the State, increased social problems, and decreased county revenue. To address these problems, the State responded to BLM's Analysis of the Management Situation noting our concerns and making recommendations on how to analyze socio-economic impacts.

Over the last year the Governor's Forest Planning Team has worked with BLM at the State and district levels to better understand and make recommendations on socio-economic impacts of proposed BLM management decisions. The State's review of BLM's socio-economic analysis is based upon a paper titled: Socioeconomic Issues and Bureau of Land Management Planning transmitted to BLM from Governor Roberts in May 1991. (Note Appendix 1) This paper describes the economic and social analysis the State would like to see presented in each BLM plan. Note additional comments in Appendix 2 (Employment Division) and Appendix 3 (Oregon State University Report).

1. Socio-Economic Conditions

The State commends BLM for analyzing migration trends, unemployment rates and the economic structure of the regional economy. We question, however, the multipliers used by BLM in calculating direct timber and timber management jobs. To strengthen this analysis, we recommend the following additions and further evaluations:

a. Simple economic base analysis showing export base for counties in each district.

b. Demographic and occupational profiles for communities likely to be impacted.

c. Occupational profile of displaced workers.

d. Reevaluate (using a consistent set of models) the impacts to total employment of harvest reductions.

e. Expand mitigation discussion to include the adverse socioeconomic impacts of the plans and ways to lessen impacts.

The final BLM plans should also update the economic data presented in the draft plans to reflect more current information. (Note Appendix 3 for a more detailed discussion.)

2. Community Stability

We agree with BLM that impacts on communities will vary within each district and across districts. A more detailed analysis is needed which would allow BLM to systematically evaluate the impact of harvest reductions on areas not only within but also outside the districts. In other words, the plans should estimate the preferred alternatives impact on community stability based on the structure, occupational mix and demographics of communities.

L0925

3. Social Impacts

Social impacts are briefly mentioned in the plans, but there is no effort to systematically analyze the likely impacts. We recommend using appropriate models (note comments from State Economists -- Appendix 2) to measure the social impacts. The key ingredient that needs to be addressed is an inventory of social impacts.

4. Recreation/Tourism Industry

In an attempt to diversify the economy of Oregon, the State supports an aggressive recreational/tourism program on BLM lands. While the recreation/tourism industry will not fully replace the personal income levels and employment opportunities that timber industry jobs produce, it still should help isolated communities in this transition period. Retraining programs sponsored by the State and federal governments will play a major part in this transition.

An alternative which emphasized recreation opportunities could have served as a benchmark from which to compare jobs gained from the various alternatives presented in the plans.

5. Monitoring

Monitoring should be an especially important part of the final BLM plans. While the draft plans include provisions for monitoring of natural resources, it should also include provisions for monitoring of socio-economic conditions and for modification of the plan based on changes in these conditions.

6. Summary

BLM districts have addressed the socio-economic impacts created by their preferred alternatives. BLM districts should strengthen their analysis and discussions in the final RMPs/EISs to include a better analysis of: district economic base and the impact on this base of the alternatives; dislocated timber worker skills and reemployment opportunities; social impacts; consistency in modeling, job multipliers, mitigation recommendations and monitoring.

Please review Economic Development Department, Department of Forestry, and the State Economist responses found in Appendix 2 and Oregon State's University's Report for specific recommendations.

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L. Road Management. How should BLM districts/resource area manage their road networks to promote compatibility with resource uses.

BLM's western Oregon road system is a valuable component of Oregon's overall transportation network. The road system serves the citizens of Oregon by providing access for timber, fish and wildlife, and watershed management. BLM roads also provide numerous recreational opportunities and are essential for forest fire protection.

Realizing the importance of road management on federal lands, the State developed a position paper titled, State of Oregon Recommendation on BLM's Road Management Program. (Note Appendix 1) We trust that BLM will consider recommendations presented in this paper when developing its final RMPs/EISs.

The road paper states that BLM should develop comprehensive road management plans. That is, in addition to road maintenance and construction goals and objectives, BLM should address the various resource concerns (i.e., recreational, fish and wildlife, timber, water resources) potentially impacted by roads. These resources are interrelated and road management plans should deal with them in an integrated fashion. Watersheds would be the ideal framework in which to develop road management plans.

BLM districts have inventoried their road networks and recognized the impact that these access routes have on natural resources. The draft plans express a need for access management in special areas, critical big game areas, old growth emphasis areas, and other areas. However, there seems to be no action plan to meet these broad objectives.

We commend the Salem District on its recognition that a comprehensive road management plan needs to be developed. They have made a commitment to develop a comprehensive road management plan soon after approval of their RMP.

The following is a brief summary of our recommendations to BLM on road management.

1. The State recommends that BLM continue to aggressively pursue funding for its road management program.
2. The State recommends that a comprehensive road management plan be completed within the framework of the RMP/EIS or shortly after approval of the plans. (Note road management paper for suggested content of management plan.)
3. The State recommends that a maximum 1.5 mile/square mile road density objective (i.e., roads open to vehicular traffic) be instituted for: sensitive watersheds; watersheds with high road densities (i.e., greater than 4 miles/square mile); watersheds with high off-road vehicle use resulting in unacceptable environmental damage; and sensitive wildlife areas. (Coos Bay and Klamath draft plans include this recommendation.)

L0925

4. Road density objectives for other areas would likely vary based on decisions made in the comprehensive road management plans.
5. The State recommends that BLM attempt to achieve a reasonable reduction (10%) in open road density over the next decade. This target may be difficult to achieve given the scattered ownership pattern of BLM lands. However, we encourage BLM to work together with adjacent landowners in an effort to accomplish this goal.
6. The State recommends that BLM's road management program be modified as needed to address the State of Oregon's recommendations for limiting development in rural interface areas.

Each BLM district is urged to coordinate with adjacent landowners and others in the development and implementation of a comprehensive road management program.

M. Special Plant and Tree Species. How should BLM protect special status plant and tree species?

1. Special Status Plant Species

BLM's draft plans have listed plant species found on each district. The State commends BLM on its commitment to protect those plant species that are either state and/or federally listed on public lands under its jurisdiction. To continue protection of existing threatened, endangered, and sensitive plant species while keeping other species from being listed, the State believes that BLM should consider the recommendations noted below.

a. BLM needs to expand the inventory of its lands to identify all existing sites for listed and candidate species, including areas not currently slated for timber sale or harvest. BLM should work with other state and federal agencies to prioritize the study and monitoring of listed and candidate species to best facilitate knowledge of habitat requirements.

b. Prioritized management plans should be developed for special status plants that outline how particular species will be protected, especially those located in land allocations that allow timber harvest and domestic grazing. Emphasis should be placed on improving or restoring critical habitats rather than merely maintaining existing often degraded conditions.

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c. Long-term monitoring of special status species, especially listed plants, is essential in determining whether plant populations are recovering or declining. Recent advances in technology should be used to develop monitoring program.

d. Maintaining species at the level of minimum viable populations may not be sufficient to guarantee survival over the long-run. It is important to recognize that a minimum viable population is essentially on the brink of catastrophe, therefore, population levels above the minimum are recommended.

BLM districts in general should be complimented on their review of listed and other special status species. These species have been listed in the draft plans. Moreover, the State applauds the recent history of cooperation BLM has shown in promoting the study of many special status species, through joint cost-sharing projects with the Oregon Department of Agriculture and other agencies. Additional comments on special plant species can be found in the Department of Agriculture's response (Appendix 2).

2. Yew Bark

Bark from the Pacific yew tree is a source of taxol which has shown promise in treating certain forms of cancer. BLM in cooperation with the Forest Service is in the process of developing an EIS for managing Pacific yew. Lands have been inventoried to determine the amount of Pacific yew. An interim strategy is being used to guide BLM and the Forest Service on Pacific yew management until the EIS is finalized.

We encourage BLM to carefully follow the interim guidelines for Pacific yew management in order to collect the maximum amount of yew bark feasible from current forest management projects

N. Tribal Concerns. How should BLM districts protect traditional Tribal cultural and spiritual sites?

Lands administered by BLM's Klamath Falls Resource Area traditionally were utilized by the Klamath, Modoc and Shasta Tribes. The Siletz and Warm Springs Tribes used lands administered by the Salem BLM District.

The State supports the protection of identified Native American sites sacred to, or of cultural significance to, the various tribes mentioned above. The Tribes' cultural history contributes to the State's heritage and should be protected. BLM should, through close coordination with the Tribes, act to inventory, evaluate, and protect sites of cultural, religious, and historic value as required by federal laws. As additional sites are located, BLM should alter its plans in order to protect them, while remaining sensitive to other uses of the lands.

O. Standards and Monitoring. Does BLM have measurable standards and a comprehensive, aggressive monitoring program to determine whether plans meet short and long-term expected future conditions?

The implementation of biological diversity/ecosystem management will mandate comprehensive monitoring programs for each district, including a dedicated funding source in order to evaluate: a) whether the scheduled activities are being implemented as per plan guidance; b) whether the implementation of activities is effective in meeting the expected future conditions; and c) determining if activities are causing the effects identified in the EIS.

Ecosystem management and its effects on resources within the forest environment is a long-term investment. Research monitoring will be necessary in order to apply adaptive management on the ground. In a sense, ecosystem management is an experiment requiring close evaluation and monitoring of thousands of short-term projects which should lead to the final desired condition.

In order for each RMP and EIS to stand alone and meet the test of public and legal scrutiny, it must include standards followed by a monitoring plan to measure results. Standards must be measurable to be meaningful. There is little purpose in defining standards for which there are no methods for measuring the degree of compliance or attainment. The true judicial litmus test for the final plans, we believe, rests with the standards that must support the resource management direction found within the RMPs.

BLM's draft plans fall short of meeting the State's expectations for adequate standards and comprehensive monitoring plans. Even though the plans note a need to include the three phases of monitoring noted above, implementation seems to be the only element covered in the monitoring sections. As an example, how will the general monitoring questions for socio-economic conditions presented in the draft RMPs surface problems with plan effectiveness?

Other questions BLM should address in their final plans include:

1. Why aren't monitoring standards presented for each land allocation (i.e., Old growth emphasis areas, General Forest, connectivity areas)?

2. Why haven't the monitoring questions presented in district plans been tied to measurable management standards?

3. Is a threshold level of plus/minus 10 percent appropriate for changes in all resource outputs or impacts to resources?

4. Where are specific, measurable standards found in the districts/resource area monitoring plans?

5. Is there a tie between implementation and effectiveness which is necessary for meeting the expected future condition (e.g., ecosystem management)? Does BLM have a long-range monitoring framework which will direct the agency over the next 100 years in order to meet these expected future conditions?

The State believes that BLM districts/resource area should develop more specific standards and comprehensive monitoring plans. Of special note would be the Forest Service's approach to monitoring effectiveness and validation. We feel that without comprehensive monitoring plans for each district/resource area, RMPS/EISs will not meet the public's expectations and legal challenges that the agency will face.

Annual Program Summary monitoring reports, being proposed by districts, are a positive way to allow the public an opportunity to track and assess the progress districts are making on implementing their plans.

P. Budgets. What budget will BLM districts need to carry out the preferred alternative? How should the districts react if a smaller budget allocation occurs?

BLM districts project a need to increase their budgets in the new plans in order to meet implementation and monitoring requirements. Due to the complexities of the plans and the new biological diversity approach proposed, the State agrees that more money will be needed for training personnel, research, implementation and monitoring.

If funding for intensive management practices under the current plans are any indication of expected future funding, the State is concerned that the new plans may not be implemented. BLM's biological diversity is an experiment in land management which relies on many as yet unproven concepts.

With the uncertainty in past and present funding levels, the State recommends that BLM address the likelihood of funding for proposed actions and the impact of BLM's resources if expected funding does not materialize. This element in and by itself stands between a successful and unsuccessful outcome. Biological diversity management will require a long-term commitment in funding to test programs and practices which accomplish the expected future conditions.

BLM budgeting should not be necessarily linked to ASQ levels. For example, the State suggests that BLM consider establishing a fund for density management activities in Old Growth Emphasis Areas that is separate from the ASQ derived source available for more traditional harvesting as proposed in the General Forest Management Areas. This approach would institutionally recognize the major goal of Old Growth Emphasis Areas which should be their utility in providing answers to critical wildlife/silvicultural questions through the application of research and monitoring.

III. DRAFT PLANS ORGANIZATION

The State agencies have found BLM's draft Resource Management Plans and Draft Environmental Impact Statements very difficult to review because of the way plans were organized. Some of the issues of concern to readers were:

A. Difficulty in distinguishing the draft RMP from the draft EIS. For example, implementation standards were scattered throughout the documents.

B. Lack of definable links between broad goal statements and specific actions (e.g., standards, guidelines, inventories, monitoring, evaluation).

C. Difficulty in identifying BLM plan policies in the RMPs.

D. Lack of substantiation to support claims of consistency with the plans and policies of other agencies affected by the RMPs.

E. Inadequate/incomplete tables of contents and indexes.

F. Numerous errors in tables and incomplete data.

G. Maps showing land allocations are too small a scale with few reference points to decipher where allocations begin and end.

The State encourages BLM to reorganize their final plans to make them more readable to the public and land managers who will be implementing the final preferred alternatives.

IV. FINAL COMMENTS

The State of Oregon's Final Coordinated Response represents the State's review of the six draft Resource Management Plans and draft Environmental Impact Statements. Twelve state agencies have submitted their recommendations to the Governor's Forest Planning Team for consideration in the development of the coordinated response. Input from six "Open Houses" held around the state this year, public comments on the State's Proposed Coordinated Response, discussions with various interest groups and individuals, and Oregon State University's Report were all considered when developing the State of Oregon's final response.

The State will work with BLM districts and the State Office, between their draft and final, to help them better understand our recommendations presented in this document.

[illegible] 5 1993

L0942

Bureau of Land Management
Klamath Falls Resource Area
2795 Anderson Ave. Bldg. 25
Klamath Falls, OR 97603

Possible Wood River Ranch Acquisition

Scoping and Public Comment Meeting
January 12, 1992

Your Opinion Matters! We are asking for your input on the possible acquisition of the Wood River Ranch property. The following types of responses will be the most helpful to the BLM in determining public opinion about the acquisition:

- *How do you feel about the BLM acquiring and managing the Wood River property?*
- *What are your concerns with the BLM acquiring property? Managing it?*
- *What issues should the BLM address?*
- *What information do you have that will help the BLM describe the properties current condition?*
- *How do you think the BLM should manage the property in the short term (2-3 years)?*

Your responses are greatly appreciated. Please give us your comments below or mail them to the Klamath Falls Resource Area office, postmarked by **Februery 12, 1993.** Thank you.

(1) Klamath County Park Board supports acquisition of Wood River property.

(2) No concerns about BLM acquiring property. We believe management should be an interagency cooperative effort.

(3) The main issue of concern for Klamath County Parks Division is of public access. Petric Park is the only current public access and there should be more areas of public access to insure better diversification of use and more even impact on area. If public is involved with responsible use of property; especially if various organizations feel they have commitments to the projects success, this project will be a much better one.

(4) We have no current information on the property itself.

(5) Property should probably be managed much as it is until a plan for the ultimate character of the land is developed and a direction for positive change can be taken. Emphasis should be given for control of noxious weeds and undesirable wildlife at this time.

The following information will be used for our comment analysis:
Name: Keith Read
Address: Klamath County Park Division
City, State, Zip code: 334 Main St., Klamath Falls, OR. 97601

L0968

DESCHUTES COUNTY
Board of Commissioners

1130 N.W. Harriman, Bend, Oregon 97701
(503) 388-6570 • Fax (503) 388-4752
Nancy Pope Schlangen
Barry Slaughter
Tom Throop

February 8, 1993

Area Manager
Bureau of Land Management
Klamath Falls Resource Area
2795 Anderson Avenue, Building 25
Klamath Falls, Oregon 97603

Dear Sir:

From the late 1970's through the mid 1980's, I had the opportunity to represent much of Klamath County, including the Klamath River Canyon, in the Oregon State House of Representatives. I am intimately familiar with the Klamath River Canyon, as I have spent many days on the river or exploring lands within the Klamath River Canyon. Though I retired from the Oregon legislature in 1986 and have served since January 1987 as a County Commissioner in Deschutes County, Klamath's neighboring county to the north, I have maintained a keen interest in this very valuable resource to Central Oregon and the entire state.

I am writing to urge adoption of the preferred alternative. It is my very clear viewpoint that the preferred alternative does a good job of balancing the various interests and establishing the proper management framework for the Klamath River Canyon. Please do the job necessary for the Klamath River Canyon and adopt the preferred alternative. Thank you.

Sincerely,

DESCHUTES COUNTY BOARD OF COMMISSIONERS

TomThroop

Tom Throop, Chair

TT/ddc

DRAFT

L0971

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Portland Field Office
2600 SE 98th Avenue, Suite 100
Portland, Oregon 97266

January 17, 1993

Memorandum

To: Director, Bureau of Land Management, Oregon State Office, Portland, Oregon

From: Field Supervisor, Portland Field Office, Portland, Oregon

Subject: Informal Endangered Species Act Section 7 Consultation on Resource Management Plans for Bureau of Land Management, Western Oregon Districts

EXECUTIVE SUMMARY

The U.S. Fish and Wildlife Service (Service) is conducting informal consultation on the Bureau of Land Management's (Bureau) Resource Management Plans (RMPs) for six western Oregon Districts (action area). The preliminary results of the consultation are summarized in this report. The informal consultation deals with all listed species located within the action area, with additional comments provided for proposed and candidate species.

The Service has identified issues of concern by species. It is important to the long-term conservation of all listed and proposed species that the Bureau adequately address concerns for these species in its continuing analysis and final RMPs. Five of these issues have surfaced as most crucial for the Bureau to address in its final RMPs:

(1) The RMPs for the Coos Bay and Eugene Districts do not specify adequate protection of occupied marbled murrelet habitat, nor do they identify means for maintenance of existing or development of future marbled murrelet habitat along the Pacific Coast.

(2) The RMPs do not consistently provide measure[illegible] term maintenance of adequate disp[illegible] for short- and long- The preferred alternat[illegible]persal condition for spotted owls. [illegible]ves (PAs) result in significant reduction in dispersal condition in areas critical for interprovincial movements and areas already deficient in dispersal habitat along the I-5 corridor.

(3) Deferred Old Growth Emphasis Areas (OGEAs) function as the RMPs' cornerstone for large habitat areas supporting clusters of breeding spotted owls. The RMPs prescribe harvest in OGEAs that may slow the development or diminish the quality of suitable spotted owl habitat. Additional details are required to fully

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identify the impacts of harvest activities on the viability of spotted owls.

(4) Analyses in the RMPs indicate that the spotted owl population is likely to continue declining, at varying rates, on Bureau lands throughout western Oregon. Adequate protection and management of spotted owl habitat in the near term will be key to arresting the decline and recovering the species. Additional protection of currently known spotted owl sites outside of deferred OGEAs may be necessary to curb the population decline in some areas.

(5) The designation of spotted owl critical habitat was effective on February 14, 1992. The Bureau has not completely analyzed or discussed the impacts of its PAs on spotted owl critical habitat. Preliminary information indicates substantial impacts on spotted owl critical habitat in the near and long-terms.

In addition to the species specific concerns identified throughout this document, the Service has provided background information and supporting rationale for species specific concerns, and information needs for further analysis. The Service recommends that upon completion of informal consultation, the Bureau request formal consultation under section 7 of the Endangered Species Act (ESA).

INTRODUCTION

This document responds to the Oregon State Office of the Bureau of Land Management's (Bureau) request for informal consultation regarding Resource Management Plans (RMPs) for the Coos Bay, Eugene, Medford, Roseburg, and Salem districts and the Klamath Falls Resource Area. Additional comments concerning threatened and endangered species within the areas listed above were provided during the environmental review of Draft Environmental Impact Statements and Resource Management Plans. The following comments are provided as part of informal consultation 1-7-93-I-100. Comments are based upon the PAs presented in the Coos, Eugene, Salem, Klamath Falls, Medford, and Roseburg RMPs. It is our understanding that a biological assessment will be forthcoming on listed species prior to initiation of formal consultation. In addition to assessing effects to listed species, the Bureau may (if possible) wish to include an evaluation of effects to proposed and Category 1 candidate species. Presentation of information on petitioned species would also be desirable, and could be submitted under separate cover. Since the status of proposed, candidate (category 1), and petitioned species may change in the short-term, addressing these species now would help insure the timeliness of Bureau documents regarding listed species.

CONSULTATION HISTORY

The Bureau requested lists of candidate, proposed, and listed threatened and endangered species which may occur in areas covered by the RMPs. The following species lists were provided to the Bureau:

Reference no.	Date	Addressee
1-7-92-SP-374	May 4, 1992	State Office
1-7-92-SP-393	June 16, 1992	Medford District
1-7-92-SP-398	June 23, 1992	Klamath Resource Area
1-7-92-SP-399	June 4, 1992	Salem District
1-7-92-SP-403	July 7, 1992	Eugene District
1-7-92-SP-571	September 22, 1992	State Office

On October 1, 1992, Bureau State Office and U.S. Fish and Wildlife Service's (Service) Portland Field Office staff met and developed a consultation schedule for the Bureau's District-level RMPs. The agencies agreed to conduct a single informal consultation on PAs for the six westside Oregon draft RMPs and to consult formally on final PAs. A schedule for completing informal and formal consultations was signed by both agencies on December 18, 1992 (Attachment 1).

The Service agreed to provide an informal consultation report by January 15, 1993 and convey findings to the Bureau throughout the process, as appropriate. The following document summarizes these findings. Portland Field Office staff will meet with Bureau staff, at their request, to discuss contents of this document.

During informal consultation, Service and District Bureau staff met for discussions and field trips relative to the RMPs. The intent of these meetings was to further apprise the Service of potential impacts of PAs to listed species, including differences between the districts relative to environmental condition and potential implementation of PAs. Where possible, field trips included examples of proposed management techniques or examples of situations where such management would be appropriate. Locations and dates of meetings include:

Salem District, October 28 to 30;
Coos Bay District, November 2 and 3;
Roseburg District, November 4 and 5;
Medford District, November 9 and 10;
Eugene District, November 30 and December 1;
Klamath Falls Resource Area (Lakeview District), December 2.

Additional information needs for informal consultation were discussed by Bureau State Office and Service staff on November 25, 1992, and in subsequent meetings on December 15, 1992, and January 8, 1993. The Bureau continued to provide new information as it became available throughout the informal consultation.

Based on the consultation schedule, the Bureau will review this document and identify any unresolved issues to the Service by March 1, 1993. The Bureau will then develop final PAs and initiate formal consultation by May 1, 1993.

GENERAL COMMENTS

SPECIES LIST CORRECTIONS

A number of Federally proposed species, Federal candidate category 1 species, and species petitioned for listing have recently changed status. These include the: marbled murrelet (threatened), western snowy plover (proposed), Oregon chub (proposed), *Lilium occidentale* (proposed), *Sidalcea nelsoniana* (proposed), *Astragalus applegatei* (proposed), and northern goshawk (candidate category 2). For your convenience, an updated list of species which may occur in Western Oregon is provided (Attachment 2).

The Service has been petitioned to list the following species: western pond turtle, goshawk, spotted frog, northern red-legged frog, and bull trout. The status of these species is currently under administrative review. The Federal status of these species may change following conclusion of the Service's administrative review. The Service recommends that the Bureau consider addressing the effects of the RMPs on petitioned species, and include this information in the biological assessment.

LISTED SPECIES RECOVERY

The ESA (section 7(a)(1)) mandates a proactive role for Federal agencies in recovering listed species. The Service acknowledges the Bureau's stated intention to manage consistent with approved recovery plans. However, this statement may not equate to a fully proactive role in recovery. The Service encourages the Bureau to fully implement all aspects of existing recovery plans applicable to Bureau lands. The Bureau should also consider that the ESA requires Federal agencies to conserve all listed species, not just those with approved recovery plans. For listed species without final recovery plans, the Service recommends that the Bureau pursue management that furthers the conservation and retains the greatest flexibility for implementing future recovery efforts.

The Service applauds the Bureau's intention, as presented in the RMP documents, to attempt to modify, relocate, or abandon projects that may adversely affect Federally listed or proposed species or critical habitat. While this should reduce potential adverse impacts, it may not provide proactive management for recovery. Further, the statement to modify, relocate, or abandon projects that may affect listed species appears inconsistent with PAs allowance of substantial impacts to spotted owls, spotted owl critical habitat, and marbled murrelets. The Service recommends that the Bureau not simply avoid adverse impacts but actively pursue projects that promote species recovery.

Currently, the only unequivocal statement in the RMP documents relative to listed species is that the Bureau will not undertake or permit actions that jeopardize populations of Federally listed or proposed species. Actions may meet this criteria, yet still reduce options or chances for recovery. The Service recommends that the Bureau include proactive management for recovery of all Federally listed and proposed species within district PAs. The Service additionally recommends that the Bureau include a similar statement regarding destruction or adverse modification of designated critical habitat.

CANDIDATE SPECIES

The Service commends the Bureau on its stated intention to manage Bureau lands in a manner that avoids contributing to the need to list any sensitive species under the ESA. This commitment expresses the intended purpose of Federal agency actions under the ESA.

The Coos Bay District RMP document describes management and maintenance of deferred OGEAs as providing habitat for old-growth dependent species to forestall listing additional old-growth dependent species and encourage delisting of species currently listed as threatened or endangered. However, the size, location, and distance between these large blocks is based on biology and behavior of the northern spotted owl. The RMP should include a list of species expected to benefit from OGEAs and describe how OGEAs will contribute to habitat, forestalling listing, and/or delisting of each species.

In the Coos Bay RMP document, connectivity areas (CAs) are also described as contributing to forestalling the listing of additional old-growth dependent species and encouraging delisting of currently listed species. It is unclear to the Service how this would be accomplished. The final RMP should identify species for which the CAs might forestall listing and how connectivity would assist species conservation.

The Service supports the Bureau's stated intent to survey all proposed project areas for special status species. The Service recommends that these surveys include the project area and areas subject to off-site or indirect impacts, (e.g. immediately adjacent habitats, downstream or down slope areas from the actual site of activity). To avoid confusion and accidental failure to locate existing specimens, detailed survey protocols and minimum standards should be established as appropriate for each species or group of species.

Many Federal candidate category 2 species need additional inventory to determine distribution, population status, and population trends. Failure to document species presence within planning areas may reflect a lack of adequate survey effort, not actual absence. The Bureau should assume species are present if suitable habitat for a species is known or suspected to exist, or until site inspections and adequate inventories are conducted that confirm their absence.

In addition to surveying proposed project areas, surveys for special status species in suspected or potential habitat are advisable. Pre-proposal survey information provides greater flexibility in planning projects that avoid conflicts and conserves resources wasted with multiple planning efforts for individual projects.

The Service recommends that the Bureau present measurable or quantifiable monitoring criteria for category 1 candidate species to provide early warning of potential management crises. For some species, this may involve tracking population trends, productivity, or available habitat and identifying a measurable threshold which, if reached, would trigger additional management actions. According to the Eugene RMP document, special status species would be monitored before and within a year after site disturbance and/or at intervals of at least five-years. While this frequency may be sufficient for some species (if all identifiable threats have been removed), it may not be sufficient for other species to adequately detect changes in habitat, or population declines. Annual monitoring may be necessary for some species, or at sites where ongoing actions pose continual threats, (e.g. grazing, recreation). Monitoring populations of Federal candidate category 2 species that occur on Bureau lands is also advisable.

LAND USE ALLOCATIONS

The primary impact of PAs to Federally listed species is through land use allocations and proposed management under these allocations. Therefore, the Service has carefully reviewed the location, intent, and proposed management in the RMP documents and discussed this review during the district meetings. In general, information regarding intent and objectives of various land use allocations was insufficient to judge the accuracy or completeness of assertions relative to impacts to listed species and critical habitat or whether proposed management actions are compatible with the RMP's intent. Since plans of this magnitude cannot specify site specific actions, detailed statements of objective and intent are useful to estimate potential impacts. The Service recommends that the Bureau specify objectives and intent of each land use allocation, including location and management.

The Service is concerned with effects that deferral of regeneration harvest in deferred OGEAs, rather than withdrawal of these areas, may have on management intensity outside OGEAs through changes to the allowable sale quantity (ASQ). Based on information presented at the district meetings and in RMP documents, the effects of future regeneration harvests on the ASQ vary between resource areas and districts. Given the limited extent of deferred OGEAs and their intent to provide habitat for old-growth associated species, future regeneration harvests seem dependent on developing forest management practices that retain old-growth characteristics or allow rapid development of these characteristics.

Considering our limited experience with this form of management, it seems prudent to assume no contribution to the ASQ from regeneration harvests in deferred OGEAs. If research provides support for application of regeneration harvest at a future date, ASQ levels may be recalculated accordingly. During the interim, ASQ levels would be sustainable on the forest lands currently available for harvest. The sensitivity analysis provided in the RMPs did not distinguish between contributions of density managment and regeneration harvest within deferred OGEAs. However, information provided at district meetings indicated that, in a few instances, future regeneration harvests proposed in deferred OGEAs had a significant impact on the ASQ, resulting in potential "over-harvest" of areas outside OGEAs in the interim. The Service recommends that the Bureau analyze ASQ assuming no contribution from regeneration harvest in deferred OGEAs.

While regeneration harvest is deferred for 80 years, some management activities are proposed within deferred OGEAs during the first decade. These proposals include density management, salvage, and potentially prescribed burning. Density management appears aimed at improving old-growth characteristics in highly simplified forests resulting from past plantation management. However, PAs lack specific statements of intent, standards or guidelines ensuring management is limited to such cases. Given the limited amount of structurally-diverse forest remaining in some deferred OGEAs, management activities should avoid these stands. As a result, proposed silvicultural prescriptions vary widely between districts; some substantially delay the onset of diverse forest structure. Given absence of specific guidelines, evaluating potential impacts of density management to listed species was difficult. The Service recommends that the Bureau provide specific intent statements and guidelines relative to the application of density management in deferred OGEAs, and that such management be limited to forest stands that are not developing diverse structure naturally. This would provide greater results for expended effort.

PAs propose potential large-scale salvage within deferred OGEAs. Dead and dying trees, as well as down logs, are an important part of the old-growth forest ecosystem. Large material in particular, is extremely hard to create once removed. Long periods of time are required to grow large trees, for snags to be created, and to eventually fall. Large-scale salvage within deferred OGEAs also carries uncertainty for the future condition of associated habitat. Given the lack of knowledge concerning natural forest development following catastrophic events, it is difficult to determine the level of stand legacy necessary to mimic or speed development of natural conditions. Therefore, large-scale salvage increases uncertainty and risk associated with developing future old-growth characteristics. The Service recommends that the Bureau evaluate potential impacts of salvage to future habitat condition within deferred OGEAs.

Similar concerns arise relative to prescribed burning within deferred OGEAs. In the mixed conifer forests of southern Oregon and the eastern Oregon Cascades, prescribed fire may be a tool to recreate a more natural forest structure and contribute to forest health. However, prescribed burning carries a risk of habitat loss, both short- and long-term. Remaining deferred OGEAs constitute a small portion of the original forest in these areas. Losses insignificant given pre-European conditions may represent a major sacrifice under current conditions. The risks and potential benefits of prescribed burning are dependent on site specific conditions and cannot be fully addressed at the RMP level. However, the Service recommends that the Bureau provide general guidelines and statements of intent or objectives to guide application and evaluation of this management technique. The Service recommends that proposals for prescribed burning be evaluated individually relative to risks and benefits of the burn, and presented for consultation when actions may affect listed species or critical habitat.

The silvicultural prescription proposed for regeneration harvest in deferred OGEAs seems inconsistent with the intent of these areas. Leaving only 6 green trees per acre for stand legacy (the same as prescribed for General Forest Management Areas (GFMAs)), seems contradictory to managing for old-growth characteristics. The RMP documents are unclear as to the application of regeneration harvest and perceptions vary between district personnel. Based on information provided during this consultation, results of regeneration harvest on a 300 year rotation could range from removal of small portions of a particular stand each 300 years to reduction of every acre in the deferred

OGEA to the minimal 6 to 8 trees per acre over a 300 year time span. Without more specific descriptions and guidelines for regeneration harvest, it is difficult to determine the impact of such harvest on listed species and critical habitat.

Throughout the documents, the Bureau acknowledges the increased risk to listed species from: 1) uncertainty associated with the human management of forests to speed the development of older-forest characteristics; and 2) uncertainty that silvicultural systems will be successful in recreating suitable habitat. These risks apply to density management, salvage, and regeneration harvest. The Service recommends that the Bureau go beyond acknowledgement of potential risks and attempt to evaluate the risks and consequences of failure. Again, inclusion of specific standards or guidelines within RMPs would allow more accurate evaluation of risks and impacts to listed species.

The concept of promoting dispersal of mobile old-growth associated species by providing CAs containing some level of old-growth characteristics between deferred OGEAs is intriguing. Several RMP documents indicate that CAs will be managed to "provide dispersal and foraging habitat for species requiring old-growth or mature habitat" and "provide connectivity and avoid genetic isolation for old-growth dependent species". Unfortunately, the documents do not list species expected to utilize these areas and do not explain why CAs are considered sufficient to prevent isolation of these species in OGEAs. This, taken with the lack of specific standards and guidelines for management of CAs makes it difficult to evaluate impacts to listed species.

Management prescriptions for CAs contain no sideboards, minimum thresholds, or function-based goals for conditions within the areas, only long-term goals, As a result the "lowest" habitat condition under the PAs are unknown. The Service recommends that the Bureau provide minimum habitat levels within the CAs to ensure proper function.

The Service recommends that final RMP include information on the species that are expected to benefit from the CAs, particularly listed species; the expected function of the area for each species; and evaluate the ability of the area to provide these functions. This should provide rationale for the location, width, and proposed management of the areas. To fully evaluate the function of the CAs, the Service recommends that the Bureau address the proposed function of the CAs, lowest condition expected in the CAs relative to old-growth characteristics, and relation to the future desired condition.

MONITORING

With the draft RMPs, the Bureau is attempting to manage forests in a manner different from all previous efforts. As a result, management prescriptions include numerous theoretical components that are as yet untested. Many prescriptions have potential to effect listed species such as the spotted owl, particularly if prescriptions fail to produce desired conditions. Therefore, the risk of failure carries serious consequences.

Given the consequences of failure, any monitoring plan for the PAs should have specific thresholds or expected results, trigger points, and specified courses of action if thresholds are exceeded or expected results do not materialise.

Actions should be immediate and conclusive. Monitoring plans should be developed prior to adoption of RMPs to allow adequate evaluation of monitoring impacts to all aspects of the RMPs. All actions should be tied to adequate monitoring. If monitoring is not funded, actions effecting the listed species should not proceed.

While it would be ideal to coordinate monitoring of listed species with other agencies with comprehensive monitoring programs, the Bureau should not delay developing and implementing monitoring plans as a consequence. Many techniques proposed by the Bureau differ substantially from other agencies and may not be adequately monitored by comprehensive plans. Monitoring is a critical part of any plan, but carries even greater weight in a plan that incorporates numerous untested procedures potentially impacting listed species. The Service recommends that the Bureau develop detailed, specific monitoring plans as soon as possible, preferably before completion of the final RMPs. Adequate and active monitoring is crucial to evaluate many of the RMP proposals.

LAND TENURE/ACQUISITION

The PAs in the RMP documents generally exclude O & C forestland from exchanges for lands to be managed for single use management purposes relative to listed species. Such a limitation appears to conflict with section 7(a)(1) of the Act that requires all Federal agencies to "...utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation..." of listed species. The Act further defines conservation as "...the use of all methods and procedures which are necessary to bring an endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such measures and procedures include, but are not limited to ... habitat acquisition and maintenance..." The Service recommends that the Bureau consider all lands relative to potential exchanges that would benefit listed species. In addition, the criteria for evaluating land acquisition should include "facilitate the recovery of threatened and endangered species" as described in section 7(a)(1) of the Act.

LISTED SPECIES

COLUMBIAN WHITE-TAILED DEER

The Columbian white-tailed deer (CWTD) (*Odocoileus virginianus leucurus*) was listed as an endangered species in 1967 (32 FR 48:4001). The Douglas County population was not officially recognized as part of this subspecies until 1977. Almost all habitat for the CWTD is on private lands. The highest densities of CWTD are found along the south bank of the North Umpqua River within about one kilometer of the river. Criteria established in the CWTD recovery plan for reclassification of the Douglas County population to threatened status call for maintenance of 1,000 animals in the herd in combination with adequate protection. To delist the species would require 500 animals distributed in a minimum of 5,500 acres of secured habitat (USDI 1983).

There are Bureau (Roseburg District) lands which fall within the current range of the CWTD. The PA states that timber harvest or other vegetation altering activities on all Bureau-managed lands within the distribution of the CWTD will only occur if they are determined to be beneficial to CWTD or until such time that definitive information is available describing the use level and value of these lands in the context of meeting recovery plan goals. In addition, acquisition of lands within the core area for the CWTD in Douglas County through exchange or purchase will be actively pursued. A habitat management plan (HMP) will be prepared for existing Bureau-managed lands determined to be of significant value to CWTD or any lands acquired specifically for this species (Roseburg RMP, page 2-43). The Service concurs with the Bureau's application of this approach for managing endangered and threatened species.

> The Service recommends that the Bureau's biological assessment include information describing what Bureau actions are ongoing or proposed for lands occurring within the range of the CWTD. Similar efforts by other agencies should be identified and may be described if known to be ongoing or planned in the near future.

The Roseburg plan identified 29.9 acres which have been withdrawn from the commercial timber base as suitable habitat for CWTD (Roseburg RMP, page 3-45). No CWTD surveys have been conducted on Bureau lands in the upland conifer habitat, adjacent to the valley oak woodlands, since the late 1970's (Roseburg RMP, page 3-45). The Service recommends that the Bureau survey upland conifer habitat for CWTD use, and would support the Bureau's commitment to actively pursue acquisition of lands within the CWTD core area.

> The biological assessment should:
>
> 1) State whether CWTD are known to utilize upland conifer habitat and how Bureau activities may effect CWTD in these areas;
>
> 2) Describe what type of activities constitute a beneficial effect for CWTD;
>
> 3) Describe when and how will use of Bureau lands by CWTD and any monitoring necessary to assess impacts (either beneficial or adverse) to CWTD be determined.

Lost River and Shortnose Suckers

The Lost River sucker (LRS) (*Deltistes luxatus*) and the shortnose sucker (SNS) (*Chasmistes brevirostris*) were listed as endangered species in 1988 (50 CFR Part 17, 1988). These fishes are endemic to the upper Klamath River Basin of southern Oregon, and northern California. Much of the habitat for the suckers is found within the boundaries of the Klamath Falls Resource Area (KFRA) of the Lakeview District. The Recovery Plan for these species is currently in draft and is due by court order to be finalized by March 1, 1993. Critical Habitat has not been designated for these species, but the Service has been ordered by the court to designate critical habitat by April, 1994.

The distribution and range of the suckers as described in the RMP document is inaccurate. The Service recommends that the Bureau's biological assessment provide an update of the currently known range and status of the LRS and SNS. When an accurate distribution is described, a re-analysis of the effects of actions on these species should be done for all areas where the RMP document has not done so.

The RMP document does not mention which actions may affect these fishes. The Service recommends that the Bureau's biological assessment include an analysis of the effects of all actions occurring in the KFRA that may have an effect on LRS and SNS, including grazing. Actions occurring within, or upstream of, known sucker habitats should be discussed. When effects of actions are discussed, the proper baseline for analysis should be an absence of the action, not the No Action alternative listed in the RMP document.

The Bureau should describe the results of any recent surveys for the suckers within the KFRA.

The Bureau should provide an analysis of proposed actions within or upstream of sucker habitats in areas that have any of the following: a) known water quality problems such as those listed in the 1988 DEQ study, b) riparian condition rated as degraded and/or identified for restoration, c) watershed condition in slight to moderate erosion class, d) grazing allotments in the "Improve" category, e) wetland habitats in less than satisfactory condition, f) aquatic habitat in less than satisfactory condition, g) predatory gamefish populations that are managed for recreational fishing, h) any other resource classification or condition that may indicate detrimental condition of sucker habitat or water quality.

The RMP document indicates some Fish Habitat Enhancement Projects are planned, but does not indicate which might benefit the listed suckers. The Bureau should thoroughly discuss potential positive effects to listed species from such projects as these.

The Service recommends that the Bureau consider designing grazing and riparian management strategies that provide for the fastest possible recovery of stream systems in, or upstream of, sucker habitat areas. The overall improvement of water quality on a drainage basin-wide scale will be central to the recovery of these species.

Bald Eagle

Isaacs and Anthony (1992) have documented 258 bald eagle nest sites in Oregon to date. Their 1992 productivity survey indicates approximately 34-35 (13.6 percent) nest sites occur on Bureau lands. In addition, areas may exist where portions of the nest stand or territory occur on Bureau lands, while the actual nest tree occurs on adjacent Forest Service or private lands.

The Bureau RMP documents generally state that proposed actions will be consistent with the recovery plan for bald eagles. However, this statement does not necessarily imply that the Bureau will be proactive, undertaking the

full range of specific actions needed to be performed to assist with species recovery.

The Service recommends that the Bureau indicate in the biological assessment, commitment to specific recovery tasks, as noted in the implementation schedule of recovery plan.

The majority of management guidelines specified in the Bureau's RMPs generally identify measures to protect and manage bald eagle nesting habitat from the threat of loss from timber harvest activities. Several RMPs outline additional measures to manage potential habitat for future nesting pairs of bald eagles, as well as perching and roosting habitat. These management guidelines attempt to address the threat of loss of habitat from timber harvest activities, distribution goals identified in the Pacific States Bald Eagle Recovery Plan, and to some extent, human disturbance. However, recreation, other water-related resource demands, and road management will likely intensify under the Bureau's Resource Management Plans. Consequently, bald eagles are likely to be subject to increasing levels of human activity in key bald eagle use areas which may lead to harassment and affect productivity.

Developing site-specific management plans has been recommended in the bald eagle Recovery Plan and the Oregon-Washington Bald Eagle Working Team Implementation Plan to manage the species, its habitat, and potential threats (USDI, 1986). For some territories, site-specific or species specific management plans already exist, (the Umpqua River corridor for example). Developing site-specific management plans allows flexibility in selecting the size and shape of buffer zones and management areas based upon site-specific information, including stand characteristics, known individual tolerances of birds, prevalent weather patterns, location of key use areas, and flight paths (Anthony and Isaacs 1989).

The Service recommends that the Bureau address management of human activities and available food resources for the bald eagle to minimize harassment and maintain bald eagle productivity in site-specific management plans.

The Service acknowledges that in some instances, activities on Bureau lands alone may not be sufficient to alleviate threats to widely ranging species such as the bald eagle, where habitat use extends onto adjacent non-Bureau lands. To further conservation or recovery of such listed, proposed, and candidate species, the Service encourages development of site-specific or species-specific management plans, cooperative agreements, and/or partnerships with adjacent private landowners and interested or affected Federal and State agencies, wherever practicable.

The Klamath Falls Resource Area RMP states that a buffer of up to 30 acres around known and future nest sites is to be provided under all alternatives. This management direction sets a maximum that may not provide enough flexibility to include trees that may be needed to provide wind breaks for the nest or roost stand, to visually shield eagles from disturbance, or to provide for long-term maintenance and viability of eagle use areas.

The Service recommends that the Bureau evaluate the limitations placed on the buffer area in the RMP and, if appropriate, include a revised

buffer standard in the final RMP. If site specific management plans are contemplated, buffer size in the RMP should allow for whatever is appropriate to the site specific conditions.

For the formal consultation on the Bureau's RMPs, the Service recommends the following information be included in the biological assessment to the greatest extent possible:

The current baseline condition for bald eagles on Bureau lands, including The number of bald eagle nesting sites and communal roosts currently existing in each District;

Information on the existing bald eagle Habitat Management Plans (HMP) (or other site-specific plans), including a list of current HMPs, year implemented, number of bald eagle territories covered by each plan, and an evaluation of the effectiveness of existing HMPs. Effectiveness should address whether productivity is being maintained in territories covered by the HMPs as compared to levels prior to development of these plans, or in areas without management plans.

Information on future planned HMPs the number of new bald eagle HMPs proposed in the near future and target dates for completion.

The number and location of potential bald eagle territories to be managed under the Bureau's RMPs; actions the Bureau will implement to maintain bald eagle nesting and foraging habitat and productivity; and cumulative effects of foreseeable actions which may contribute to harassment of bald eagles and degradation of their habitat.

Some of the RMP documents do specify guidelines for management of bald eagle habitat. Some of the recommendations appear inconsistent with the Pacific Bald Eagle Recovery Plan. For example, the Klamath Falls Resource Area RMP document states that management activities would be restricted within 1/4 mile of nests from January 1 to August 15. While a 1/4 mile buffer during the breeding season may be sufficient in some cases, it may not be adequate to avoid effects in all cases or for some types of activities. The frequency, magnitude, and duration of potentially disturbing activities can also substantiate the need for increased analysis area and buffer distance, (e.g. blasting, intense low level aerial flight, and activities in or near key use areas or occurring within line-of-sight of the nest or communal roost sites). The Pacific Bald Eagle Recovery Plan advises that activities should be regulated up to 800 meters from nests and roosts where eagles have line-of-sight vision.

The Service recommends that the proposed guidelines be checked for consistency with the Pacific Bald Eagle Recovery Plan and modified if not consistent.

Peregrine Falcon

Oregon has experienced a noticeable increase in the number of peregrine falcon eyries in the last several years. Currently, 23 natural eyries exist within Oregon with new eyries being documented yearly. Based on biological needs and

sensitivity of the species, peregrine falcons may be adversely affected by road management, recreation development, mineral exploration, timber harvest activities, grazing allotments, and increased recreation pressure and/or development including off-road vehicle use.

The Bureau RMP documents generally state that proposed actions will be consistent with the recovery plan for peregrine falcons. However, this statement does not necessarily imply that the Bureau will be proactive, undertaking the full range of specific actions needed to be performed to assist with species recovery.

The Service recommends that the Bureau indicate in the biological assessment, commitment to specific recovery tasks. as noted in the implementation schedule of the recovery plan.

As recovery of this species progresses, there is potential for additional eyries to be established.

To assure that new pairs are adequately considered early when evaluating project impacts, the Service recommends conducting periodic inventories of potential habitat needs prior to undertaking actions which may affect the species.

The Service acknowledges that in some instances, activities on Bureau lands alone may not be sufficient to alleviate threats to peregrine falcons where habitat use extends onto adjacent non-Bureau lands. To further conservation or recovery of such listed, proposed, and candidate species, the Service encourages development of site-specific or species-specific management plans, cooperative agreements, and/or partnerships with adjacent private landowners and interested or affected Federal and State agencies, wherever practicable. The Service recommends that the Bureau cooperate and coordinate with the Oregon Department of Fish and Wildlife on conducting inventories and monitoring productivity at existing eyries.

For the formal consultation on the Bureau's RMPs, the Service recommends the following information be included in the biological assessment to the greatest extent possible:

Information regarding the number of eyries on Bureau lands; and

An evaluation of potential impacts to peregrine falcons and measures which have been or will be taken to manage existing and potential sites (e.g. development of site-specific management plans, use of seasonal restrictions, the level of monitoring to be conducted, etc.)

Aleutian Canada Goose

The Coos District RMP document states that the highest potential for management conflict would be between Aleutian goose habitat management and some forms of recreational use. This statement suggests that Bureau actions may affect listed species.

The Service recommends that additional information regarding the types, timing, frequency, and magnitude of land use activities currently occurring within Aleutian Canada goose habitat, and an evaluation of impacts be provided in the Bureau's biological assessment.

Marbled murrelet

The marbled murrelet was Federally-listed as a threatened species as of September 28, 1992 (57 FR 45328). The marbled murrelet ranges from Alaska (Aleutian Archipelago, Kodiak Island, and Kenai Peninsula) south to central California. Some wintering birds are found in southern California. Marbled murrelets are not limited to old-growth coniferous forests for nesting, but also utilize mature forests with old-growth components. The marbled murrelet is threatened by the loss or adverse modification of nesting habitat (older forests) primarily due to commercial timber harvesting. It is also threatened from mortality associated with current gill-net fishing operations and the effects of oil spills.

Little information was presented in the RMP's regarding marbled murrelet life history, distribution, abundance, and habitat characteristics.

> The Service recommends that the biological assessment include the most recent life history, population distribution, abundance information, and habitat assessments available for marbled murrelets within plan areas.

Under the Eugene District PA, a large portion of the Bureau's landbase within the range of the marbled murrelet would be managed as a CA. Given the management prescriptions for CAs, it seems unlikely that these areas will contribute to the availability of suitable marbled murrelet habitat to any great extent.

> The Service recommends that the biological assessment for the formal consultation contain an analysis of the suitability of management within the CAs to murrelet nesting habitat and an evaluation of the impacts of management actions on the species.

Under the Coos Bay District PA, the preponderance of the Bureau's landbase within the range of the marbled murrelet, especially those areas closest to the ocean, are designated as GFMA. GFMA management, both prescriptions and short rotation times, are unlikely to provide any suitable marbled murrelet habitat in the long-term. The Service is very concerned with the loss of marbled murrelet habitat in these areas. Many of the sites where marbled murrelets were observed engaged in "occupied" behavior are not protected at all, as they fall within the GFMA.

> The Service recommends that the Bureau develop and mandate measures to protect occupied and nesting sites for marbled murrelets in the final RMP. These measures should be aimed at maintaining the greatest array of options for future recovery of the marbled murrelet. These may be altered once a recovery plan is approved.
>
> Further, the Service recommends that the Bureau develop an interim management plan for marbled murrelets that addresses existing suitable habitat on Bureau lands within the range of the marbled murrelet. The existing deferred OGEA placement and management is directed at the needs and biology of the spotted owl, and does not necessarily meet the needs of the marbled murrelet. This should also focus on maintaining options for future recovery plans.

Northern Spotted Owl

The northern spotted owl (spotted owl) (*Strix occidentalis caurina*) was listed as a threatened species effective July 23, 1990 (55 FR 26114). Critical habitat for the spotted owl was designated effective February 14, 1992 (57 FR 1796). Detailed accounts of the taxonomy, biology, and habitat of the spotted owl are found in the draft Recovery Plan for the Northern Spotted Owl (draft Recovery Plan) (USDI 1992), A Conservation Strategy for the Northern Spotted Owl (ISC Strategy) (Thomas et al. 1990), 1989 Status Review Supplement (USDI 1989), 1987 and 1990 Fish and Wildlife Service Status Reviews (USDI 1987, 1990), and the above mentioned Federal Register notices.

The PA appears styled along recent management proposals for spotted owls which include two major components: 1) large habitat "reserves" designed to support a cluster of breeding spotted owls and 2) habitat to support movements between these clusters. To function adequately, such a networked reserve system must provide some level of short to intermediate-term population stability within the clusters and allow sufficient movements between the clusters to prevent genetic and demographic isolation. The analyses and comments on the PAs in the RMPs are based on this premise.

Through review of the RMP documents, field trips, and additional information presented by the Bureau during the informal consultation process, the Service has identified several critical issues relative to the impact of the PAs on spotted owls and spotted owl critical habitat. The primary concerns include dispersal or movements of spotted owls throughout the network of OGEAs, potential management activities within the deferred OGEAs, losses of spotted owls in areas with critically low populations, and impacts to spotted owl critical habitat.

Dispersal

Dispersal and movements of spotted owls between the deferred OGEAs are critical to the long-term persistence and viability of spotted owls within these clusters. Given the currently low populations of spotted owls in portions of the Oregon Coast Ranges physiographic province, dispersal between the deferred OGEAs within this province and between provinces is also critical to maintaining the distribution and viability of spotted owls in the short and intermediate-term.

The Bureau provided the Service with plots depicting the condition of each quarter-township with Bureau ownership, by decade, from 1990 to 2040. This information was depicted in terms of the "50-11-40 rule". The Service utilized these plots to analyze the impacts of the PAs on dispersal condition. The "50-11-40 rule" is the ISC Strategy's description of forest conditions that would likely allow for successful dispersal, with 50 percent of each ownership in each quarter-township dispersal habitat (trees with an minimum

average diameter at breast height of 11 inches and 40 percent canopy closure) (50-11-40). Given the erratic dispersal behavior of juvenile spotted owls, 50-11-40 is designed to be applied to all quarter-townships, not just those forming corridors between large blocks.

In recognition of the limited ability of Federal agencies to provide 50-11-40 across the entire quarter-townships in areas of checkerboard ownership, the ISC accepted a higher, but undefined, level of risk in such instances. The ISC also assumed adoption by the Federal agencies in 1991 and recommended review of the application of 50-11-40 in 3 years. Questions remain concerning the adequacy of applying 50-11-40 to only Federal lands where the Federal government controls only part of the landscape. Unfortunately, the areas of greatest concern for inter- and intra-provincial dispersal correspond with areas of limited Federal lands in checkerboard patterns. Therefore, the maintenance of 50-11-40 in checkerboard areas may not be sufficient to maintain adequate dispersal. Harvest resulting in less than 50-11-40 condition in such areas would indicate serious limitations on successful dispersal. For the purposes of this consultation, dispersal was considered compromised when conditions on Bureau lands within a quarter-township dropped below 50-11-40.

Projected decadal conditions under the PAs were compared to plots of the decadal conditions under the ISC Strategy. The ISC Strategy mandated adherence to the "50-11-40" rule on all quarter-townships. Therefore, conditions projected under the ISC strategy are considered the best possible condition that the Bureau could achieve. This condition also corresponds to proposals in the draft Recovery Plan.

Under the ISC Strategy, projected dispersal conditions on Bureau lands in Oregon improve steadily until, with the exception of a small area northwest of Medford, only scattered quarter-townships are below 50 percent 11-40 condition by 2010. By comparison, under the PAs, dispersal conditions remain poor, and even deteriorate further, in several areas. Clusters of deficient quarter-townships are retained or form in the area around the Umpqua Valley; the coast south of Bandon; east of Eugene; southeast of Coos Bay; the Scappoose Block northwest of Portland; and northwest of Medford. In most of these cases, the number of quarter-townships below 50-11-40 continues to lag behind the ISC Strategy or even increase until 2030, then show some improvement by 2040. In addition, scattered quarter-townships remain below 50-11-40 throughout Bureau lands until at least 2040.

The Service is particularly concerned where the improvement of dispersal conditions is delayed or worsened within the areas of concern for inter-provincial movements. Dispersal through the South Willamette/North Umpqua and Rogue/Umpqua areas of concern are critical to maintaining continuity between populations in the provinces and to potential demographic rescue of low populations in the Oregon Coast Ranges province.

Currently 34 of the 68 quarter-townships in the South Willamette/North Umpqua area of concern are below 50-11-40. Under the ISC Strategy, this falls rapidly to only 5 in 2010 and none by 2030. Under the PAs, improvement in dispersal condition is slowed, with 18 quarter-townships below 50-11-40 in 2020 and 15 in 2030. This area of concern is the most direct link between the western Oregon Cascades and Oregon Coast Ranges province.

The northern portion of the South Willamette/North Umpqua area of concern is included within a non-deferred OGEA. This designation may provide additional support for successful dispersal in the long-term. Maintenance of conditions above minimal 50-11-40 in this area might improve the chances of successful movements across this area, particularly given that Federal ownership is well below 50 percent of the landbase over much of the area and the already limited habitat condition on the Federal lands. Unfortunately, the proposed management within the non-deferred OGEA does not specifically target the need to maintain adequate dispersal, therefore recovery of better dispersal condition is delayed compared to the ISC Strategy. The Service recommends that specific guidelines be provided for this non-deferred OGEA to ensure the maximum possible improvement in dispersal condition and continued maintenance of high quality dispersal condition at all times. Further, the Service recommends that all portions of the South Willamette/North Umpqua area of concern outside of deferred OGEAs be included in the non-deferred OGEA allocation.

In the Rogue-Umpqua area of concern, 28 of the 109 quarter-townships are currently below 50-11-40. This falls to 8 in 2010 and none in 2030 under the ISC Strategy. Under the PAs, conditions worsen to a maximum of 39 quarter-townships below 50-11-40 in 2020 and 17 below by 2040. This area of concern provides for dispersal between the western Oregon Cascades, Klamath, and Oregon Coast Ranges provinces. The inclusion of the portion of this area of concern between OCA OD-16 and OD-26 in a CA may improve conditions in the long-term, through maintenance of habitat above the minimal 50-11-40 condition. Unfortunately, the CA lacks specific guidelines to improve dispersal condition as quickly as possible, leading to concerns for short and intermediate-term dispersal in the area. In fact, based on the plots supplied by the Bureau, the dispersal condition actually declines for 30 years before beginning to improve. In addition, the CA encompasses only a portion of the area of concern. The Service recommends that the CA between and adjacent to DCAs OD-16 and OD-26 be expanded to include the entire area of concern, and the area for 6 miles south of the Medford District boundary also be included in this CA. The Service further recommends that management guidelines for this CA specify maintenance of 50-11-40 as a minimum at all times.

In addition to dispersal between provinces, the Service is also seriously concerned for dispersal conditions within the Oregon Coast Ranges province itself. Spotted owl populations within the northern portion of this province are extremely low, both in general and within the deferred OGEAs. Levels of interchange sufficient to provide some demographic rescue effect may be necessary to maintain spotted owl populations within some of these deferred OGEAs in the short or intermediate-term. Currently 165 of the 463 quarter-townships within the Oregon Coast Ranges are below 50-11-40. This falls to 38 by 2010 and 1 by 2030 under the ISC Strategy. Under the PA, improvement in dispersal condition is severely slowed, with 142 quarter-townships below 50-11-40 in 2020 and 63 below in 2040.

Although not previously identified as an individual area of concern, the area of scattered Bureau ownership along the Williams River west of Roseburg is one of the weakest links between spotted owl population clusters in the Oregon Coast Range. The extremely limited Federal ownership in this area and current condition of habitat on private land creates a likely barrier to dispersal movements between the southern-most portion of the Oregon Coast Ranges and the remainder of the Oregon Coast Ranges. The southern-most portion of the Oregon Coast Ranges is connected to the Klamath and western Oregon Cascades province through the Rogue/Umpqua area of concern. Failure to provide dispersal across this area increases pressure on the South Willamette/North Umpqua Area of Concern, leaving it as the only potential connection between spotted owl populations in the western Oregon Cascades and Oregon Coast Ranges.

Given the extremely limited Federal ownership in this area, management at the minimal 50-11-40 level on Bureau lands is unlikely to provide for adequate dispersal across the area. While a portion of this area was identified as a CA, the existing land allocations appear inadequate in size, scope, and management condition to improve the potential for successful dispersal. The Service recommends that, to improve dispersal conditions in this area, the Bureau manage the lands in the Coos Bay and Roseburg Districts between DCAs DD-29, OD-31, and OD-32 for maximum habitat quality. In addition, the Bureau should consider pursuing land purchases or exchanges to increase the Federal ownership in this area to improve long-term movement potential.

While dispersal within the areas of concern is critical, the need for dispersal condition across the landscape should not be overlooked. The apparent tendency for juvenile spotted owls to disperse in random directions and backtrack former movements increases the importance of maintaining adequate dispersal condition throughout the cluster network. The Bureau should alter management prescriptions to improve dispersal condition where it is already limited and prevent future development of clusters of quarter-townships below 50-11-40.

The timing of impacts to dispersal condition from the PAs correspond with the period of low quantity of suitable habitat and spotted owl populations, exacerbating the concerns over dispersal condition. The synergistic effects of low habitat, low populations, and reduced dispersal on the viability and recovery of spotted owls is potentially greater than the individual affects. To adequately address the potential impact of limited dispersal condition on spotted owls, the Service recommends that the Bureau conduct an analysis on the impacts of dispersal, population, and habitat condition in the short-term, long-term, and lowest point in the intervening period, on the viability of the spotted owl.

Based on statements in the RMP documents, the Bureau expects the management regime proposed for the southern portion of the Medford District and the Klamath Falls Resource Area within the range of the spotted owl to meet dispersal habitat needs. Given the proposed level and intensity of operations within the GFMA in this area, the Service recommends that the Bureau provide additional documentation to support this expectation in the biological assessment for the formal consultation. In general, most of the RMP documents provided a simple enumeration of quarter-township conditions in a limited portion of the district, with little or no analysis of the impact of the PAs on dispersal condition for spotted owls overall. The Service recommends that the Bureau provide a complete analysis of the impact of PAs on dispersal and viability of spotted owls in the biological assessment for the formal consultation. This analysis should include impacts in the short-term, long-term, and lowest projected point in the interim as compared to the ISC Strategy, at the range-wide and provincial level. If this analysis indicates any serious impacts to the potential dispersal of spotted owls, the Service recommends that the Bureau alter the final RMPs to ameliorate the identified impacts.

While most of the analysis and information relative to dispersal condition for spotted owls is described relative to the "50-11-40" rule, this is not a design feature of the plans. The PAs in the RMP documents propose to meet the dispersal needs of mobile old-growth dependent species through the designation of CAs, though only the Coos Bay RMP document explicitly includes spotted owls in this group. If the Bureau envisions CAs providing adequate dispersal for spotted owls, this should be explicitly discussed and defended. Based on current knowledge of the dispersal behavior of juvenile spotted owls, corridors of even moderate quality habitat are unlikely to provide for adequate dispersal; corridors at a minimal 50-11-40 are even less likely to function as intended.

Activities in Deferred OGEAs

The Service assumes that the deferred OGEAs serve the function of large habitat areas supporting breeding clusters of spotted owls. As such, it is critical that these areas support populations of sufficient size and fecundity to maintain internal stability over the short and intermediate-term. This is particularly important in areas where existing populations are limited and scattered, or dispersal condition is currently limited. Therefore, the Service is concerned if management activities are proposed within these areas that slow the development or alter the quality of suitable habitat. Activities that slow the initial development of suitable habitat, but improve the eventual quality of habitat may be acceptable, but only if conditions within the individual deferred OGEA are currently sufficient to provide internal stability in the interim.

Based on the information contained in the RMP documents, it is difficult to determine the extent of activities within the deferred OGEAs under the PAs. The PAs appear to allow management in currently suitable spotted owl habitat, as long as the conditions are not reduced below old-growth characteristics or can quickly recover to such characteristics. Such activities could allow the short-term loss of spotted owl habitat in critical areas.

After the District meetings, it became evident that not all districts have an equal understanding of the intent of the deferred OGEAs. Proposed management within deferred OGEAs varied from no activity in suitable spotted owl habitat to management that would delay the onset of suitable spotted owl habitat until forests reached an age of 150 years. Under this latter plan, only 50 percent of the deferred OGEAs would be suitable spotted owl habitat at any particular time within the 300 year rotation. This seems inconsistent with the intent of the deferred OGEAs relative to old-growth species and the assumptions of the spotted owl population modeling used to compare the alternatives. Given the checkerboard ownership patterns, maintenance of only 50 percent suitable habitat would result in very few hexagons in the McKelvey model meeting the minimum habitat levels for occupancy, even under the most lenient assumptions.

In addition, the Coos Bay PA mentions 10-acre regeneration clearcuts with minimal retention of stand legacy and the maintenance of permanent openings within the deferred OGEAs for big game forage. These also seem inconsistent with the intent of the deferred OGEAs. The Service recommends that the PAs for the final RMPs contain standards for deferred OGEAs promoting the development of suitable spotted owl habitat throughout the deferred OGEAs as quickly as possible. Detailed intent statements relative to deferred OGEAs would also help to clear up any confusion.

The PAs include the application of "density management" techniques to speed the development of old-growth characteristics in deferred OGEAs. However, with the exception of the Salem District, no standards or guidelines are provided that limit density management to currently unsuitable spotted owl habitat and previously managed stands. Density management in the deferred OGEAs should be conducted only if it accelerates the development of old-growth characteristics in young, managed forests and not to situations already on the way to developing old-growth characteristics, even if the techniques are expected to quickly re-establish these characteristics.

Many of the techniques proposed for application in the deferred OGEAs are relatively untested. The RMP documents acknowledge the increased risk to spotted owl viability caused by the uncertainty associated with the human management of forests and the uncertainty that silvicultural systems will be successful in recreating suitable habitat. Given our limited understanding of and experience with, forest management for old-growth characteristics, there is a higher risk of some level of failure from the application of these techniques. These risks and uncertainties apply to the management proposed in the deferred OGEAs, non-deferred OGEAs, and CAs. Unfortunately, no specific evaluation of this risk is included in the documents. The Service recommends the inclusion of a restriction on density management within deferred OGEAs to currently unsuitable habitat to increase the predictability of management actions and reduce the potential for short-term negative effects on spotted owls.

The Service is particularly concerned that, based on the PAs in the RMP documents, between 35 and 75 percent of the deferred OGEAs may be impacted by density or other management. The documents gave no indication of the time period covered by these estimates. The shorter the time frame of these impacts, the greater the risk to spotted owls from potential failure of the silvicultural techniques to produce the desired results. The Service recommends that the Bureau explicitly analyze the risks associated with density management and other activities proposed in the deferred OGEAs. To limit the risk, guidelines should be included within the PAs in the final RMPs on the application of the experimental techniques.

While discussions of dispersal conditions are usually limited to areas outside deferred OGEAs, dispersal within the clusters is equally important. Density management and regeneration harvest within the deferred OGEAs should not result in dispersal condition below 50-11-40 at any time. Over time, the deferred OGEAs are expected to meet dispersal condition with no special attention. However, given the currently limited habitat condition in some deferred OGEAs, short-term deficiencies are possible. The Service recommends that the Bureau mandate that any activities within the deferred OGEAs not result in conditions below 50-11-40.

Spotted Owl Populations

Habitat is the key to the continuation of spotted owl populations. Management under the PAs in the RMPs will effect habitat and, therefore, spotted owl populations throughout western Oregon. Many of the known spotted owls on Bureau lands are potentially effected by habitat limitations. The Bureau provided information on the percent of currently suitable habitat on Bureau lands within the median home range area of the site center for all spotted owl sites on Bureau lands that were occupied between 1989 and 1991. While some of these sites may have additional habitat on non-federal or adjacent Federal lands, no information on these lands was available for this consultation. The values provided are still indicative of general conditions. The following analyses are based on the habitat condition on Bureau lands alone.

Based on information provided by the Bureau, 39 percent of the 833 known sites have less than 20 percent suitable habitat on Bureau lands. An additional 45 percent have less than 40 percent habitat on Bureau lands within the median home range area. Only 3 percent of the known sites have 60 percent or greater suitable habitat on Bureau lands.

At the provincial level, 45 percent of the western Oregon Cascades and Oregon Coast Ranges sites are already below 20 percent habitat on Bureau lands, while only 28 percent of the sites in the Klamath province are below this level. Conversely, only 12 percent of the Oregon Coast Ranges site have greater than 40 percent habitat on Bureau lands, followed by 16 percent in the western Oregon Cascades and 19 percent in the Klamath province. Only 1 site in the Oregon Coast Ranges currently has greater than 60 percent habitat on Bureau lands. Based on this information, many of the known spotted owl sites on Bureau lands are already below habitat levels that are likely to result in reduced reproductive success and survival.

The likely long-term fate of known sites is dictated by the primary land allocation within their home ranges under the PAs. Sites within the GFMA are unlikely to persist over the long-term. Under the short rotations prescribed for these areas, spotted owl habitat is unlikely to develop between regeneration harvests. Sites within CAs are also unlikely to remain long-term. While rotation lengths are greater in these areas, the majority of the area will not be suitable habitat at any particular time, making aggregation of sufficient suitable habitat to support stable sites uncommon. Conditions within non-deferred OGEAs are likely to vary depending on management scope and the success of experimental silvicultural techniques. Some owl sites are likely to persist in these areas.

Despite the 8 decades of deferred regeneration harvest in the deferred OGEAs, and given the current levels of suitable habitat, even some spotted owl sites within these areas are likely to disappear as spotted owls adjust to the existing habitat conditions. Populations are expected to drop initially in these areas, eventually stabilize, and increase again as currently unsuitable habitat in the deferred OGEAs recovers. In addition, some known sites may be disturbed by interim management activities or catastrophic events in the short-term.

Of the 833 known sites, 43 percent lie within lands allocated for GFMA and another 10 percent lie within CAs. These are concentrated in the western

Oregon Cascades and Klamath provinces, where 56 and 67 percent of the sites lie within these allocations, respectively. Spotted owl populations in the Oregon Coast Ranges are considered to be in the greatest peril statewide. In this province, 39 percent of the known sites lie outside the protection of the deferred OGEAs. While Forest Service lands play the major role in retaining spotted owl populations in the western Oregon Cascades, the Bureau is a primary player in the Oregon Coast Ranges, and the only Federal agency capable of maintaining connectivity between populations in the provinces.

Based on the sample 10-year timber harvest plan, 9 percent of the known sites on Bureau lands will drop below 20 percent habitat for the first time over the next decade. This impact is lower in the Oregon Coast Range, where only 4 percent of the sites will drop below 20 percent habitat and greatest in the Klamath province where 13 percent of the sites will drop below 20 percent habitat on Bureau lands.

Although many of the spotted owl sites in the Oregon Coast Ranges are protected by deferred OGEAs, the Service is seriously concerned by the potential short-term loss of any sites within the sparsely populated northern portion of this province. Short- and intermediate-term cluster stability is even more critical in light of the already limited dispersal condition in the Oregon Coast Ranges and impacts of the PA to the development of dispersal condition. Many of the population clusters in this area are already below occupancy levels that would ensure internal stability. Based on the information in the ISC Strategy, population clusters below 15 breeding pairs are less likely to remain stable over the intermediate time period.

The ISC Strategy and draft Recovery Plan proposed supplementing clusters that were below stable levels by protecting additional sites outside the population clusters. The Service recommends that the Bureau adopt a similar strategy to supplement any deferred OGEAs that are below, or are expected to drop below these levels based on habitat condition. This concept is mentioned in the Eugene District RMP document, however, no guidelines were provided for the number, location, or habitat provisions for these additional sites.

The Service recommends that the Bureau evaluate the current and short-term population condition within the deferred OGEAs to determine the internal stability of these population clusters, and supplement any deficient clusters at levels to ensure cluster stability. Individual protected sites outside the deferred OGEAs should be chosen to provide the best clustering effect and include sites with sufficient habitat to ensure some stability and successful reproduction. Maximum habitat levels should be maintained around these sites until habitat and populations recover within the deferred OGEAs.

Spotted Owl Critical Habitat

Spotted owl critical habitat was designated effective February 14, 1992. The RMP documents contain only passing mention and no analysis of the impacts of the PAs on spotted owl critical habitat. The Bureau has provided some summary information on the current condition of Bureau lands within critical habitat units (CHU) and the impacts of the sample 10-year timber harvest plan on CHUs. The Service strongly recommends that the Bureau include a complete analysis and discussion of the impacts of the PAs on spotted owl critical habitat in

the biological assessment for the formal consultation and the final RMP documents.

The following discussion includes only those CHUs containing Bureau lands and only information on the Bureau portion of CHUs shared with the Forest Service. Of the 17 CHUs in the western Oregon Cascades, 10 contain less than 60 percent suitable habitat on Bureau lands and 5 of these are below 40 percent. Only 1 of the lowest habitat CHUs has additional contribution from National Forest Lands. Eighteen of the 21 CHUs in the Oregon Coast Ranges province are below 60 percent suitable habitat, with 3 of these below 40 percent. Five of the 10 CHUs in the Klamath province contain less than 60 percent suitable habitat, with only 1 below 40 percent habitat.

CHUs within the areas of concern represent the most likely source population for the production of juveniles that would then disperse between provinces. Therefore, the condition of these CHUs takes on particular interest. Four of the 5 CHUs in the South Willamette/North Umpqua area of concern are already below 60 percent suitable habitat and 3 of these are below 40 percent. Two of the CHUs in the Rogue Umpqua area of concern are below 60 percent suitable habitat, though both remain above 40 percent.

In Oregon, the Bureau manages approximately 1,000,000 acres of land within the CHUs. The likely impact of the PAs on spotted owl critical habitat is dependent on the land use allocation. Twenty-three percent of the spotted owl critical habitat on Bureau lands is allocated to GFMA. The proposed management of these areas contains little consideration for spotted owl habitat and, based on the short rotation periods, is unlikely to provide more than dispersal quality habitat. An additional 6 percent of the Bureau's compliment of spotted owl critical habitat lies within CAs. The longer rotation periods within CAs and greater retention of stand legacy will likely provide some suitable habitat over time, though at a reduced level compared to habitat capability.

Seven percent of the spotted owl critical habitat acres lie within the non-deferred OGEAs. The longer rotation periods and experimental techniques prescribed for these areas are likely to provide a greater level of suitable habitat than CAs, though less than the optimum. The remaining 57 percent of spotted owl critical habitat on Bureau lands lies within deferred OGEAs. Suitable habitat conditions within these areas are expected to generally improve over the next decades, then fall again as regeneration harvest is applied within these areas following the 8 decade deferral. Given the variety of management allocations within spotted owl critical habitat, it is difficult to determine the future condition of the CHUs and the ability of these conditions to meet the intended function of spotted owl critical habitat towards recovery of the subspecies.

Based on the sample 10-year timber harvest program, approximately 31,000 acres of designated spotted owl critical habitat will by subjected to regeneration harvest within the next decade. An additional 10,000 acres will be subject to partial harvest and 1,200 acres to overstory removal. Approximately 2,000 acres will be impacted by road construction. Finally, an undetermined amount of spotted owl critical habitat will be subject to density management harvest. No information was provided to allow evaluation of the effect of density management on the primary constituent elements of spotted owl critical

habitat. In total, at least 45,000 acres of spotted owl critical habitat will be affected by management activities within the next decade.

The Service is particularly concerned about impacts to CHUs already in poor habitat condition. Of the 9 CHUs with less than 40 percent suitable habitat on Bureau lands, 5 have substantial portions of their area in the GFMA or connectivity land allocation and will be severely impacted over time. Only 2 of these CHUs have over half their area within deferred OGEAs. Based on the sample 10-year harvest plan, the impact of regeneration harvest over the next decade ranges from no harvest to removal of 35 percent of the remaining habitat in these CHUs.

Given the level of impact proposed, long-term application of the management prescribed in the PAs is likely to result in reduced ability of some CHUs to function as envisioned in their designation, and reduction in the value of spotted owl critical habitat for survival and recovery. The lack of specific management objectives or guidelines for spotted owl critical habitat in the PAs make exact determination of the impacts difficult at best. The Service highly recommends that the Bureau address the management of spotted owl critical habitat in the final RMPs.

Viability/Risk Assessment

Many of the management prescriptions and silvicultural practices proposed in the draft RMPs, while they are intended to improve conditions for older forest species such as the spotted owl, are experimental in nature. As such, they carry a higher risk of failure than traditional techniques. In the face of this risk, the Service is concerned over the lack of any assessment of the viability of spotted owls under the plan or risk to spotted owls from the management proposed in the PAs. The RMP documents mention the potential risk, but contain no evaluation of this risk. This risk has at least 2 levels, risk of failure of proposed silvicultural systems to recreate suitable habitat and risk to the stability of spotted owl populations in the event that the silvicultural practices fail to meet expectations.

In addition, practices that improve spotted owl habitat in the long run may have short and intermediate-term costs in terms of habitat and populations. Simple evaluation of the conditions at 100 years under the PA will not fully address the impact of proposed management on spotted owl viability. Based on the information provided by the McKelvey Model, the low point in spotted owl populations on Bureau lands under the PAs occurs at about 70 years in the future. Therefore, any assessment of viability or risk should consider viability in the short-term, long-term, and lowest point in the intermediate-term. Improved habitat amounts and conditions 100 years in the future are of little value if the spotted owl populations are extirpated before habitat recovery.

The Service highly recommends that the Bureau conduct an explicit evaluation of spotted owl viability or the risk of viability under the PAs. This evaluation should address viability/risk in the short-term, lowest population/habitat levels, and long-term.

Monitoring

The experimental nature of the proposed RMPs and the serious consequences of failure of several portion of the proposal to fulfill expectations on spotted owl populations and recovery elevates the importance of monitoring under the RMPs. While it would be ideal to coordinate monitoring of spotted owls on all lands through application of comprehensive monitoring programs developed under the auspices of a spotted owl recovery plan, there is little likelihood that such a program will be in place in the near future. In addition, many of the techniques proposed by the Bureau are not part of the draft Recovery Plan and monitoring under the Recovery Plan is unlikely to adequately address these techniques. Therefore, the Service recommends that the Bureau develop its own monitoring plan for spotted owls relative to the management proposals in the PAs. Once an interagency monitoring plan is developed, the Bureau may alter its monitoring to accommodate any differences as appropriate. Monitoring is a critical part of any plan, but carries even greater weight in a plan that incorporates numerous untested procedures that potentially impact listed species. The Bureau should not delay implementation of a monitoring plan waiting for the Recovery Plan to be finalized.

Nestucca River OGEA

The Nestucca River non-deferred OGEA includes the area proposed as DCA OD-36 in the draft Recovery Plan, and is the only DCA in which the Bureau proposes to begin management and regeneration harvest immediately. Due to past management practices, this OGEA currently contains exceedingly limited older forest habitat and very little structural diversity within forested stands. Under these conditions, immediate treatment to accelerate the development of stand diversity may be justified despite the potential risks of human management mentioned earlier in this document. However, this does not explain the discrepancy in the rotation periods between the deferred OGEAs (300 years) and the Nestucca River OGEA (150 years). If the intent of this OGEA is to improve old-growth characteristics, a 300 year rotation would seem more appropriate. In addition, the prescription of regeneration harvest on areas up to several hundred acres in size seems inconsistent with the intent of maintaining old-growth character.

Given the critical location of this block at the extreme northern end of Federal ownership in the Oregon Coast Ranges, development and maintenance of a viable spotted owl population in this area is crucial to eventual recovery of spotted owl populations in the northern Oregon Coast Ranges. The Service recommends that the immediate management in the Nestucca River OGEA be concentrated on forest stands that are the least likely to provide any support for the few spotted owls known in this area. In addition, the Service recommends that the Nestucca River OGEA be managed on a 300 year rotation and that regeneration management be limited to those situations where such drastic measures are most likely to improve the quality of future habitat. Finally, the Service recommends that regeneration harvest be limited in scope and designed to maintain forests with old-growth characteristics to the greatest extent possible.

Core Area Protection

The PAs in the RMP documents discuss the "protection" of 80 to 100 acres for all nest sites or known pairs, however, the application varies significantly between districts. The Eugene District did not specifically discuss core area protection. In the remaining RMPs, these areas are deferred from harvest, not withdrawn. Deferral period ranged from the time until the site is unoccupied, to 10 years, to 80 years. The Roseburg District proposed protection for all pair sites, while the other districts targeted only nest sites. Some districts limited protection to sites in the GFMA or CAs, while others made no distinction by land allocation.

The PAs contain no information on the intent or function of these protected core areas. The ISC Strategy and draft Recovery Plan contain similar prescriptions as part of the effort to develop forest management techniques capable of supporting commodity production and spotted owls across the landscape. Owls appear to be very tenacious to existing core areas. Because recreating nesting habitat is likely to be very time consuming, these protected core areas may form the nucleus of future sites. The Service assumes that the Bureau's intent in protecting these areas is similar. This should be clarified in the biological assessment.

Based on the above assumption, the Service recommends that the Bureau protect core areas around all known and future spotted owl pairs or resident singles, regardless of known reproductive status. Core areas should be protected in all land use allocations, including deferred OGEAs. Protection should be specifically defined. The Service recommends that all forest or land-altering activities, or actions that may disturb spotted owls, be prohibited in these areas, including density management. Further, the Service recommends that the protected area should contain 80-100 acres of suitable habitat, not just land area. To allow for periodic occupancy as forest conditions around these core areas change, these areas should be withdrawn, rather than deferred. If they remain deferred, criteria for release should be carefully spelled out in the biological assessment for the formal consultation.

Seasonal Restrictions

Two of the RMP documents specify a seasonal restriction within 1/4-mile of spotted owl core areas from March 1 to September 30 of each year to protect nesting spotted owls. The Service recommends that this restriction be included in all the RMPs and expanded to prohibit all activities within 1/4 mile of all known spotted owl core areas (pairs or resident singles) that may disturb nesting spotted owls. These restrictions could be lifted for a particular year if intensive surveys reveal that spotted owls are not nesting or raising young on the area.

PROPOSED SPECIES

Oregon chub

The Oregon chub was proposed as endangered on November 19, 1990. The Oregon chub is a small cyprinid fish that formerly inhabited sloughs and overflow

ponds throughout the Willamette River in Oregon. Remaining established populations are restricted to a 30-kilometer stretch of the Middle Fork Willamette River drainage, just 2 percent of its historic range. Existing populations continue to be threatened by:

1) Direct mortality from chemical spills or applications adjacent to existing habitat;

2) Competition with or predation by nonindigenous fishes;

3) Continued habitat loss.

The Service recommends that the Bureau address any impacts of the RMPs to the Oregon chub in the biological assessment.

Western Snowy Plover

The Pacific Coast population of the western snowy plover was proposed as threatened for listing as threatened on January 14, 1992. The Pacific Coast population is threatened throughout its range in the United States by loss and disturbance of nesting sites. Sand spits, dune-backed beaches, unvegetated beach strands, open areas around estuaries, and beaches at river mouths are the preferred coastal habitats for nesting. Instances of low nest success have been attributed to a variety of factors, including predation, human disturbance, and inclement weather. Permanent or long-term loss of nesting habitat to urban development and encroachment of introduced European beachgrass has led to a decline in active nesting colonies as well as an overall decline in the breeding and wintering population of the western snowy plover along the Pacific coast of the United States.

The biological assessment needs to evaluate impacts to the western snowy plover from road development and recreational use. The Coos District RMP document indicates that western snowy plover habitat is present at the North Spit and at New River. The biological assessment should also address the status of management plans for the control of beach grass (Coos).

Astragalus applegatei

Applegate's milk-vetch (*Astragalus applegatei*) was proposed as endangered on November 26, 1991. The species grows in flat, open, seasonally moist remnants of floodplain alkaline grassland of the Klamath Basin. The three known sites occur near Klamath Falls on State or private lands. There are no known locations of this species on Federal lands at this time.

Sidalcea nelsoniana

Nelson's checker-mallow (*Sidalcea nelsoniana*) was proposed as threatened on June 7, 1991 (56 FR 26373). The species is known from restricted areas of the Willamette Valley and adjacent Coast Range of Oregon. Mowing, plowing, recreational use, and roadside spaying threaten the remaining populations of this plant in the Willamette Valley. In the Coast Range, plans for the construction of a reservoir threaten the largest population of this species. The Coast Range population occurs in part on Bureau lands. The biological

assessment should identify effects of Bureau actions taken to date for species conservation and identify proposed species conservation activities resulting from implementation of the RMP's.

Lilium occidentale

The western lily (*Lilium occidentale*) was proposed as endangered on October 26, 1992 (57 FR 48495). The species is known to occur in 30 small, widely separated populations in sphagnum bogs, coastal scrub and prairie, and other poorly drained soils along the coast of southern Oregon and northern California. The species grows at the edge of sphagnum bogs and in forest or thicket openings along the margins of ephemeral ponds and small channels. The species also grows in coastal prairie and scrub near the coastal prairie and scrub near the ocean where fog is common.

Threat to the species include development (a.g. roads, cranberry farms, buildings, and associated infrastructure), competition from encroaching shrubs and trees into lily habitat, bulb collecting, and grazing by domestic livestock and deer. Human activities have interrupted natural processes of bog and wetland creation and maintenance, so that there are fewer bogs in early successional stages suitable for this lily.

There are no known locations of the species on Federal lands. However, a 20-mile stretch of coast from Bandon to Cape Blanco was identified in 1989 as an area likely to contain undiscovered populations. Inventories should be conducted if potential or suitable habitat may be affected by any Bureau action.

Candidate Species

The Bureau should expand on their list of special status species. All Federal candidate category 1 species should be considered special status species. In addition, species such as *Lupinus sulphureus* var. *kincadii* should be included.

The northern goshawk, fisher, western pond turtle, Del Norte and Siskiyou Mountain salamanders, long-billed curlew, Gold Beach and Pistol River pocket gophers, and several invertebrates are federal candidate species which should be given consideration as special status animal species occurring in the planning area.

Townsend's Big-eared Bat

The Townsend's big-eared bat is a Federal category 2 species candidate. The species needs protection from human disturbance. The bat may be affected by recreational activities and blasting. Adequate inventories are essential to determine key use areas. Since hibernacula sites are often at different locations than nursery sites, management must often be extended to multiple sites to protect one local population. Human activities near bat caves and bat colonies should be restricted during periods of bat use. Enforcement of restrictions and monitoring of compliance to restrictions is often essential,

especially in situations where a pattern of human use has already developed. Monitoring Bat population monitoring needs to be carefully done by qualified personnel and may require additional restrictions to limit entries.

Fender's blue butterfly and Kincaid's lupine

The Fender's blue butterfly and Kincaid's lupine *Lupinus sulphureus* var. *kincadii* are Federal candidate category 2 species. Fender's blue butterfly was believed extinct in Oregon until Dr. Paul Hammond discovered a colony in 1989. During the last 2 years, surveys for additional populations and its host plant (Kincaid's lupine) were conducted. In recent years, the butterfly has been observed at 12 extremely restricted and disjunct sites within the Willamette Valley. Of these 12 sites, 1 occurs on National Wildlife Refuge lands, 1 in part on State lands, and the remaining 10 occur on private land. Kincaid's lupine is the primary host plant for the larvae of the Fender's blue butterfly, although *Lupinus albicaulis* and *Lupinus laxiflorus* may be utilized in some instances. Essential habitat includes the species' host plant and nectar sources. Based upon studies of related species, it is possible that ants may have an important role in the species' life history. Threats to the butterfly and its habitat include vegetative succession and land management actions which adversely modify or destroy native prairie. Limited population size, distribution, and potential threats are primary concerns of the Service regarding these species. Secure habitat and appropriate management are essential for conservation of these species.

PROCEDURE

The regulatory purpose of informal consultation is for agencies to coordinate project design with the intent of avoiding adverse effects to listed species. The Bureau has made a concerted effort to incorporate the needs of listed species while developing its RMPs. It is apparent, however, that adverse affects to listed species are likely to occur as a result of implementation of some portions of the RMPs. Where adverse affects can not be avoided, formal consultation is required.

As indicated in the December 18, 1992 agreement letter, the Service and Bureau will meet over the next two weeks to discuss the conclusions displayed in this document. The Bureau will then make appropriate modifications to its PAs, prepare biological assessments based on the revised PAs, and request formal consultation with the Service.

CONCLUSION

This concludes the report offered as part of informal consultation on the Bureau's draft RMPs. We appreciate the opportunity to comment on the Bureau's draft RMPs and look forward to working together to complete the section 7 consultation process. Any questions or comments about this document should be referred to the appropriate member of the Portland Field Office staff as indicated in Appendix 1 at (503) 231-6179. This draft informal consultation report will be finalized on February 1, 1993. Please provide comments as soon as possible so they may be incorporated in the final version.

L0975

The Klamath Tribe
P.O. Box 436
Chiloquin, Oregon 97624
Telephone (503) 783-2219

February 11, 1993

Cathy Humphrey - Planner
Bureau of Land Management
Klamath Falls Resource Area
Klamath Falls, OR 97603

Subject: Comments on proposed Wood River Ranch Acquisition

Dear Ms. Humphrey:

This letter is in response to your request for pubic comments on the acquisition of the Wood River Ranch and subsequent restoration of wetland conditions. The Tribe would like to express its strong support for this Acquisition but would like to emphasize that the property be managed to enhance its wetland values. This should include both palustrine and riparian wetland systems. There is a unique opportunity to enhance not only the open water/submergent/emergent type wetlands but also the riverine corridor along the Wood River and Sevenmile Canal. We feel that all other uses and management should be secondary to and not interfere with restoration of wetland and riparian habitat.

Collection of baseline data is an essential component for future management and research and should begin as soon as possible. The following types of data should be collected: water quality and hydrologic information on the canals within the property boundaries, soil information, seed bank availability, existing vegetation and hydroperiod relationships, and channel morphological information on the Wood River adjoining the property. We would also like you to give careful consideration to whether the current grazing practices should be continued this year without change. Perhaps a regime of different grazing levels could be implemented (e.g., 1/2 and 1/4 of current levels). We also strongly recommend that the southern portion of the property that you will acquire this year be excluded from any grazing.

In addition, in its legal capacity to comanage and coordinate with Federal and State agencies the Tribe requests that we be involved in all future management and research decisions; including archaeological and cultural resources, biological, sportsman use (hunting) and agricultural management. We will follow with a more detailed letter regarding other elements of interim management of the property. We applaud your efforts to purchase this property and restore its wetland potential, and for your willingness to include the Tribe in the planning process.

Sincerely,

Charles E. Kimbol Sr.
Tribal Chairman

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